DOMESTIC ENGINEERING

PLUMBING HEATING LIGHTING MILL SUPPLIES

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Some Dope to the Jobber Who Poses as a Manufacturer

During the past few years there has been observed a growing tendency on the part of some jobbers and dealers **to push the sale of goods under their own name or brand. This practice,** while it may be understood by the large consumer, **is unjust both to the manufacturer of a standard article sold under established and well known trade marks, and to the every-day user** who is continually urged to take "our own Switchem brand, which we know is fully as good as the Standard."

* * *

If the purchaser will pause a moment to consider the question, he can but admit that while **Jones as a jobber or dealer is all right, his name** or special brand on leather belts, packing, heating boilers or any other article **does not protect the purchaser unless the name of the manufacturer is also included.** As a further demonstration of the inconsistency of this custom and the danger to the manufacturer of a high grade article who may be tempted by the prospects of a good sized order, let us take the following case:

* * *

The foregoing mentioned Jones offers his entire business on garden hose for a certain period to Smith & Company, on condition that they furnish same, stamped "Jones' Special," and do not place their own name or trade mark on the goods. Jones pushes his "Special" brand, and to convince his customers as to its quality, tells them confidentially that, while he sells it as his own, it is really made by **Smith & Company,** whose product, of course, is well known. Therefore the reputation of **Smith & Company** has really sold the hose. However, before very long the Brown Company, who make hose **to sell on price rather than merit,** have been noting with envy that Jones has quite a trade on hose, and go to him with this proposition: "We will give you just as good an article for less money and make it up under the **same name as you are now using."** Naturally this appeals to Jones, who goes over to the Brown Company, **without, however, making any mention of this fact to his customers.** Needless to say, the new hose does not give satisfaction, but who is condemned? Did not Jones state that these goods were made by **Smith & Company?** Consequently the product of Smith & Company received **a black eye** and the concern is placed in the category of those who **make good stuff just long enough to get a foot-hold.**

* * *

This is not an overdrawn instance or one which occasionally happens, **but is frequently met with. The jobber and dealer who avoids the practice** mentioned and who **insists on handling an article of reputation, stamped with the name of the maker,** who will stand behind his product, **cannot fail to be benefited** by the time and money spent by the **manufacturer** in establishing his reputation.

* * *

The manufacturer of honest goods who will refuse to supply his product to the trade under special brands, **unless accompanied by his own name or trade mark,** may not be able to secure all the business in his line. He will, however, **have the confidence of the consumer whom he insures against misrepresentation,** and the support of the **dealer** who appreciates that the **best guarantee** he can offer his customer on an article **is the name and trade mark of a reputable manufacturer.**

* * *

Another point to be considered is the difficulty of obtaining duplicate parts, and of locating the manufacturer when claims for defective goods are made. It is an every-day experience of both dealer and manufacturer to receive orders for repairs and duplicate parts of various specialties, **which contain either no name** or the **special brand of some jobber-dealer.** In the first instance there is small chance of accommodating the customer, and in the second case, while the jobber may recall that the last lot of "Justlikem Compression Bibbs" were bought of a factory in New England, the sample which must be duplicated does not match anything else in stock. However, it has the dealer's brand, like all the others, although it may have been made in Timbuctoo.

* * *

The manufacturer also has his share of these troubles, and often mortally offends the indignant customer when he confesses that he cannot supply repairs for something which he never made, although the dealer whose special brand appears on the article in question did a year or two ago have a contract with him for the season's supply.

* * *

It would seem, therefore, that if anything is to be accomplished along the line of protection to the consumer and support of the dealer, **consideration must be given the manufacturer who refuses to sell under private brands without his own trade mark to protect the purchaser, whoever he may be.**

Reciprocity and Resale Price will save the Trade from utter Demoralization

Systems of operation and general and particular principles of trade dealings have been taught and practiced from time immemorial. With but little modification or extension these systems and principle govern the trades of modern times. They are held in esteem, because experience has clearly proven that their observance tends to improve and better trade conditions. While this is held to be true, there is nothing to prevent these ethics being disregarded, but such disregard has invariably proven demoralizing to the trade in general, and particularly detrimental to the interest of those where the offense occurs.

Like other trades, the plumbing supply business has its code of principles, promising great reward if adhered to, but having the weakness that all others possess when disregarded; for like causes produce like effects.

The ordinary methods observed in the manufacturing and commercial world for the production, distribution and consumption of plumbing supplies, is found in Manufacturer, Jobber, Plumber. The manufacturer may not say, "I have no need of the Jobber," nor may the Jobber say, "I have no need of the Manufacturer." Nor may either say, "I have no need of the Plumber," any more than the body can say to the feet, "I have no need of thee," or of the eyes, "I have no need of thee." **Taken as a whole, they constitute the TRADE** and should be so considered; for **not one of these subdivisions may transgress the accepted trade usages and customs, without expectation of reaping a train of evils.** The injury of one is an injury to all. It is in recognition of these facts that for some time past there has been a desire to bring these factors in the trade into closer and more harmonious relations. The manufacturer is seeking for reciprocity, the jobber is asking for an increased differential, while the plumber is insisting upon narrowing the protection now afforded and confining it within a much more limited field.

"Absolute Contentment." It happened in the establishment of Wm. D. Rogers & Co., at Schenectady, N. Y. Mr. Stricklett, a member of that illustrious concern, is found here with James W. Crosby, of the F. W. Webb Manufacturing Company, of Boston, Mass.

There is nothing surprising or unusual in the desire of manufacturer or jobber, for through frequent interchange of ideas and experience, the manufacturer has reached the conclusion that, to extend the protection given the jobber, the distributor in turn should support the manufacturer; and the jobber, through a similar interchange of ideas and experience, has arrived at the conclusion that no one can handle the product of a manufacturer on a 5 per cent differential and pay fixed charges, much less make a profit. Hence, the demand for reciprocity on one hand and the request for an increased differential on the other. **Neither are unreasonable, unjust or unwarranted, nor are they of a character to merit the condemnation of the trade or the public.** Notwithstanding this, the demands of manufacturer and jobber remain as yet to be realized.

Many causes have contributed to bring about this result, but it is possible to summarize the principal objections in a few brief words. **The manufacturer will not protect the jobber, the jobber will not keep the differential.** In place of confidence, doubt and suspicion, **if not positive unbelief,** is manifested by both parties. This is the result after two or more years of effort, and it may not be out of place to be more specific and state briefly a few of the causes influencing the result. It must not be understood that all are chargeable with these specific acts, but a sufficient number within the trade to bring about this condition **are guilty.**

Manufacturers have sold to the trade, without regard to a differential. Others have been known to sell the trade at a price which the jobber was compelled to pay for the goods; while others have made a dumping ground of certain territories to the material loss of the jobbers therein located. The jobber is no less responsible, for **they have been known to shade an established differential.** The price cutter has been met with cut prices, to the extent of not only giving the differential away, but in some instances, more besides. Leaders were confronted with leaders until a reasonable return was impossible. So injurious and demoralizing was the situation engendered, that manufacturer and jobber jointly, **finally shaded the quality** of plumbing material **in an effort to bring the price to a point that would enable them to meet the rapid yet ever increasing difficulty.** While selling to department stores, mail order or catalogue houses has been repeatedly condemned as injurious to the trade, **they continue to secure plumbing goods.** While the employment of brokers and commission men is recognized as a demoralizing factor, **they still find employment.** Lump estimates being capable of hiding a multitude of curious things, have ever been held as specially bad for the plumber, **it still has a number of practitioners.** Boxing and cartage are freely admitted as a reason-

able and proper charge, yet it is known that some fail to make such charges.

The Scripture propounds a query which applies with peculiar force to these causes. Which man is worthy of commendation? The man who says he will and does not, or he who says he will not and does.* The poet has also written:

If I knew you and you knew me,
'Tis seldom we would disagree;
But, never having yet clasped hands,
Both often fail to understand
That each intends to do what's right,
And treat each other honor bright.
How little to complain there'd be,
If I knew you and you knew me.

One thing is certain and sure; if a cure for these demoralizing actions is to be found, **manufacturer and jobber will have to become more intimately acquainted with each other and both will have to respect such recognized and accepted ethics of the trade as tend to strengthen and build up the business,** or the conditions now so generally deplored, may be expected to continue with ever increasing destructive power. If the manufacturer would establish **a differential of 20 per cent on lead pipe,** what possible good could be derived **if the jobber gives the differential away?** What benefit could follow if the jobber respects the differential, and the manufacturer forgets the existence of such differential? Will either sit down and let business go quietly by? Does not all experience disclose the fact that every advantage taken is but temporary in character, speedily met, and has but one result, **the destruction of confidence?**

It is this loss of confidence that has made it difficult to secure the manufacturer proper support, or gain an adequate differential for the jobber. With upward of three hundred and thirty manufacturers producing one or other of the lines included in the plumbing supply business, two hundred and ninety jobbing houses, together with fifty branch or subsidiary houses, spread over forty states and located in one hundred and fourteen separate jobbing centers, the perfect understanding foreshadowed by the poet would seem impossible of fruition; yet **all these interests may become known and known favorably,** by and through **adherence** to such commonly recognized trade ethics as tend to advance the interest of the manufacturer, assure the jobber of an adequate differential, protect the plumber and care for the sanitary welfare of the consumer. **Is it not worth while? Are not the evils and abuses sufficiently drastic? Are their influences not sufficiently apparent? Have they tended to make business profitable or bring conditions favorable to such a result?**

Who is opposed to the demand for a margin of profit that will warrant the continued use of capital, or justify the time and labor expended in conducting the business?

Reciprocity has been preached by the manufacturer, and the jobber has strenuously advocated resale principles, believing each offered a solution to the difficulty. Both propositions contained such a fund of merit that the entire trade were attracted to the contention; and "Domestic Engineering" was replete with articles bearing on one or other of these suggestions. **Taken separately, neither reciprocity nor resale will be crowned with success, but by uniting the two suggestions, you have presented the basic idea of every valid contract and the only basis favorable to a satisfactory settlement of the matter.** The individual manufacturer can legally establish a differential and such safeguards as may in his judgment encourage the distribution and use of his product. The individual jobber can legally contract with such a manufacturer, if the conditions imposed and the terms offered are of a satisfactory character.

The best efforts are always directed to sell the goods which yield the best margin of profit, and there is nothing that will so quickly tend to keep a commodity on the shelf, than to place it on a non-profitable basis. Widely advertised articles of this character will be found on the shelves of the dealer, but they are not pushed and are likely to be kept a long time if the profit bearing product has any virtue, for it will always have the preference of the distributer. It is folly to expect any other result and experience has shown this to be absolutely true.

A commodity once found to be a non-profitable product, even when there is no real competitive article existing, inevitably leads to the search for and discovery of a substitute.

The laborer is truly worthy of his hire; and the manufacturer or jobber is no less worthy of a just reward as a recompense for his efforts. This will never be secured through exhibitions of bitterness and the disregard of every known trade principle. **It may only be made a possibility, by the exercise of renewed confidence; by adherence to trade ethics; by reciprocal obligations; and by a rigid respect to established differentials.**

"A Quiet Session in the Bronx." These delegates from Rochester and Syracuse, N. Y., spent several days in New York City en route to the Boston convention. From left to right they are: F. E. Fladd, J. P. Hargather and Tom Yauchzi, of Rochester, N. Y., and the following members from Syracuse: J. L. Curran, W. F. Gooley (astride Count Bucko), Wm. Dougherty, Chas. A. H. Kienzle, Louis Yauchzi (of Rochester), Fred Soper and T. G. Ward.

*But what think ye? A man had two sons and he came to the first, and said, "Son, go work today in the vineyard." And he answered and said, "I will not:" but afterward he repented himself, and went. And he came to the second, and said likewise. And he answered and said, "I go, sir:" and went not. Whether of the twain did the will of his father?—Matth. 21:28-31.

Hot Water for Domestic Use—XII*

EDITED BY JNO. K. ALLEN

Mem. Am. Soc. Inspectors of Plumbing and Sanitary Engineers; Mem. Royal Sanitary Institute of Great Britain; Assoc. Mem. Am. Soc. Heating and Ventilating Engineers; Hon. Mem. Chicago Architectural Club.

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HEATING WATER WITH GAS.

Gas has come into such general use, within recent years, for cooking of meals and other household purposes, that it is not surprising to find it invading the field of coal, in the heating of water for domestic use. The value of gas as a fuel lies in the fact that as soon as it is lighted, the maximum degree of heat is immediately developed, and this heat can be applied at any convenient point in a heating apparatus. On account of the heat immediately reaching its maximum degree, as soon as the gas is lighted, and the fact that a certain percentage of the heat contained in gas is not required to produce a draft to promote combustion, as in the case of coal, ordinary illuminating gas can easily compare with coal in economy and can be used in some installations where coal would be too expensive. Ordinary illuminating gas contains between 650 and 700 available B. T. U.'s per cubic foot, and this heat is sufficient to raise the temperature of one gallon of water from ordinary temperature, which is 62 degrees Fahrenheit, to between 110 and 120 degrees Fahrenheit; as 120 degrees Fahrenheit is as warm as water is required for bathing, dish-washing, laundry work and other household uses, it may be roughly estimated that one cubic foot of ordinary illuminating gas will heat one gallon of water to a suitable temperature for domestic uses. The convenience of gas, the lack of dust and ashes are additional considerations which recommend gas for heating water; and with the various appliances now on the market, a suitable heater can be obtained for use under most any known condition of service. Roughly, the gas burning apparatus used for heating water may be divided into three different classes, which are known as instantaneous water heaters, gas water heaters, and automatic instantaneous water heaters. The instantaneous water heaters are the simplest and least expensive of all gas heaters, and, as would be expected, the most restricted in usefulness. Usually, they are used to supply water only to the bath tub or to the bath tub and lavatory in a bath room, leaving the rest of the building piped only for cold water. Nevertheless, this type of water heater has its field of usefulness and gives good service when installed.

Gas water heaters, on the other, are attached to the range boiler, where they take the place of a waterback; and automatic instantaneous water heaters are designed to supply hot water to the entire building, day or night, without any care or attention from the inmates, and with a consumption of gas only when water is being heated.

INSTANTANEOUS WATER HEATERS.

A simple apparatus for heating water instantaneously with gas is shown in Fig. 15. In this illustration part of the casing is removed, so the interior construction may be seen and the operation described. This apparatus will not heat water under pressure, but only when released from pressure and flowing over the plates by gravity. Owing to this fact, the heater must be placed at a higher elevation than the fixture it is intended to supply with hot water. The operation of the heater is as follows: A special gas cock *a* is so constructed that gas cannot be turned on to the heater without also turning on the water valve *b*, thus preventing the overheating or burning of the water heating plates. A pilot light *c* is always burning, so that as soon as the gas and water are turned on the gas enters the burners *d d* from the ring *e* to heat the plate surface. When the water is turned on it flows through the valve *b* and up through the standpipe shown in the centre of the cylinder, to near the top of the apparatus, where it is discharged through a spray nozzle and falls in a thin sheet, which spreads out over the entire heating surface *i*. As the water flows over this thin metal surface, it absorbs heat from the flames and hot gases within, so that by the time it reaches the bottom of the compartment and flows out of the spout into the bath tub or other fixture, it is heated ready for use. A drip-ring *f* is provided near the bottom of the cylinder to catch the drip from the beads of moisture which condense on the

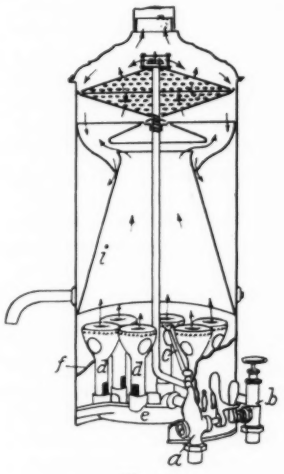


Fig. 15.

*Previous installments in this series of articles were published March 7 and 21, April 4 and 18, May 2 and 16, July 11, August 15 and 29 and October 3 and 24. These back numbers can be obtained for 10 cents a copy.

under side of the heating plates. If this drip ring were not provided, sufficient water would drain onto the floor to keep it damp, rot the woodwork and in other ways become a nuisance.

Instantaneous water heaters are not suitable for heating large quantities of water, nor are they designed to heat any quantity of water to a high temperature; their chief usefulness lies in their adaptability to heat water for bathing purposes, and for this use they are often placed in buildings which contain bath rooms, but which are not equipped with hot water supply pipes. When used in a bathroom, the heater is placed on a shelf near the fixture to be supplied, so that the heated water will flow direct by gravity into the receptacle. For this purpose they are highly satisfactory and may be depended upon to give entire satisfaction. Another use to which instantaneous water heaters may be put, is to heat the water for bathing and washing at camps and seaside resorts. If gas is not obtainable in the locality, by making a few changes the heater can be converted into a gasoline-burning water heater. When a heater of this type is located in a bathroom, a branch from the discharge tube can be run to the wash basin while the main tube discharges into the bath tub. By placing a valve or cock in the main tube, the water can then be so controlled that it may be discharged at will, either into the bath tub or into the lavatory. When the valve is open, the water will flow into the bath tub only, and when the valve is closed the water will flow into the wash basin. To insure there will be no backing up into the basin when the water is wanted at the bath tub, the pipe to the basin should be given a slight upward pitch, so the water will have to rise an inch or more to discharge into the basin. Intelligent care must be exercised in operating a heater when gas is the fuel, for if the cylinder becomes filled with gas, there is liable to be a disastrous explosion when the gas is ignited.

Instantaneous heaters of this description are quite economical in the consumption of gas, but they are limited in usefulness by the fact that they have the capacity to supply only a few fixtures, which must be located close together.

(To be continued. All rights of republication reserved.)

Buckle, the famous historian and author of "The History of Civilization," said: "Men and women range themselves into three classes or orders of intelligence; you can tell the lowest class by their habit of always talking about persons; the next by the fact that their habit is always to converse about things; the highest by their preference for discussion of ideas."

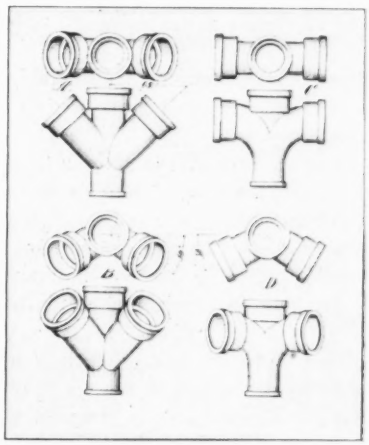
A New Cast Iron Soil Pipe Fitting*

By Chas. B. Ball, C. E.

Member A. S. I. P. S. E., Chief Sanitary Inspector, Chicago

IT IS with considerable diffidence that one suggests to the skilled designers and practical constructors of plumbing the possibility that there may be room for improvement in such common and well-developed forms of construction as those which are now in vogue for designing and building cast iron soil and drain pipes. If, however, there is a recognized defect in the present methods which constitutes a distinct limitation of the usefulness of certain types of soil pipe design, one may hope that well considered modification will be freely credited with whatever merit it may possess.

The soil pipe fitting which this paper presents for discussion is a modified form of the 45 degree



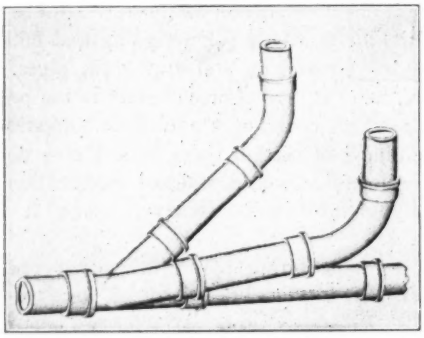
New cast iron soil pipe fittings.

double Y or its companion, the double T Y. In those cities which have a comprehensive system of regulations, like Chicago, the use of a common double Y branch is prohibited. The well-known reason is, that if this fitting is laid with only a slight fall the fact that the axis of the two branches is in the same plane as the main axis of the pipe allows opportunity for solid matters entering from one branch line to collect and form obstruction in the

*Read at the third annual meeting of the American Society of Inspectors of Plumbing and Sanitary Engineers, held in Chicago on February 10-12, 1908.

opposite side of the fitting. Because of this objection, the convenience of the double fitting must often be sacrificed and single Y's used, thus materially complicating the construction.

It would be entirely possible to design a fitting in which the branches should enter with their axes above that of the main line, so that wastes flowing from them would fall downwards and perhaps be carried through on account of the flow in the principal pipe. A construction of this kind with shelves or benches on each side of the main pipe



New cast iron soil pipe fitting in use.

and with the branches entering considerably above the bottom of the main is frequently used in designing sewer junctions.

So far as I am aware, the only fitting which attempts to meet these conditions is the double angle Y which has been made only with the intention of connecting water closets located immediately above the drain line. The axes of the branches of this fitting lie in a plane parallel with the main axis.

The modified form of fitting which I propose, instead of having the branch lines axes in the same plane as that of the main line, is designed with the purpose of raising them from the common plane in which they have heretofore been placed to a considerable angle with that plane. Whatever angle may be made with the horizontal plane, by one branch, it is obvious that the relation of one branch to the other would double that angle. By this construction the steep slope opposite to the branch from which obstructive matters may flow prevents their entrance and accumulation, and thus overcomes the objection to the use of the double fitting.

A fitting designed on these modified lines would be well adapted for such situations as those in which a main line receives connections from water closets on each side of it, a common layout in the plan of school houses and other large buildings.

For the convenience of designers, I have computed a table showing the angle which the branch axis makes with the horizontal plane to correspond to a given angle measured at right angles to the principal axis.

For a 45 degree Y, the column at the left gives the principal angle from the horizontal plane and the column at the right the corresponding decreased angle in the vertical plane in which the axis of the branch lies:

5 deg.	3 deg., 32 min.
10 "	7 " 6 "
15 "	10 " 44 "
20 "	14 " 26 "
25 "	18 " 15 "
30 "	22 " 13 "
35 "	26 " 21 "
40 "	30 " 41 "
45 "	35 " 16 "

A further practicable variation of the modified form should be suggested. If a branch is designed with a considerable slope, it might not be found desirable because of lack of space to continue the pipe along that line to the point where the fixture is to be placed, or an upward bend attached. There could be introduced into the fitting itself a change of form by bending the hub to a nearly vertical position, perhaps that corresponding to a grade of ½" to the foot, and the pipe extended on the lesser grade. It may be worth while to note that such a construction would be admirably adapted to the single Y or single T Y fitting where a horizontal pipe enters at an angle into a main line.

The double Y or double T Y of the modified form would be exceedingly convenient in a vertical stack. It has of course been impossible to place a common double Y in a stack located in a chase in a masonry wall, as there are no means of connecting with such a fitting in the plane of the wall. The usual clumsy construction of placing a single fitting looking outward extending that horizontally and then branching in one or both directions is indirect when compared to the possibilities of the double fitting in which the outlets if desired might be placed at 45 degrees to the plane of the wall, or 90 degrees to each other. By the use of the modified form, a water closet could be connected on each side of a partition opposite or near a stack in a wall chase with directness and facility.

There are doubtless other uses to which this improved fitting could be applied, which will occur to those who are skilled in such design.

Domestic Engineering's Data Sheets

16

Oct. 31, 1908

These sheets may be had printed separately for preservation in a binder. Price 10 Cents

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Table of Water Gauges, Ventilating Pressures, Horse Powers in Air, Etc.

Reprinted by courtesy of "The Engineer," Chicago.

Water Gauge	Ventilating Pressure lbs. per Square Foot	Pressure Ounces per Square Foot	Pressure Ounces per Square Inch	Velocity of Air ft. per min $481.2\sqrt{H}$	Height of Air Column One cu. foot weighs .0763 lbs	Foot lbs in 1000 cu. feet of Air	Horse Power in 1000 cu. feet of Air
.1	.52	8.32	.05	1251	6.8	520	.016
.2	1.04	16.64	.12	1780	14.0	1040	.031
.3	1.56	24.96	.17	2165	20.4	1560	.048
.4	2.08	33.28	.23	2502	27.2	2080	.063
.5	2.60	41.60	.28	2839	34.1	2600	.079
.6	3.12	49.92	.34	3079	40.9	3120	.081
.7	3.64	58.24	.40	3272	47.7	3640	.110
.8	4.16	66.56	.46	3560	54.6	4160	.128
.9	4.68	74.88	.51	3777	61.4	4680	.141
1.	5.20	83.20	.58	3945	68.2	5200	.159
1.1	5.72	91.52	.63	4138	75.0	5720	.173
1.2	6.24	99.84	.70	4330	82.0	6240	.188
1.3	6.76	108.16	.75	4523	88.7	6760	.205
1.4	7.28	116.48	.80	4715	95.5	7280	.225
1.5	7.80	124.80	.86	4860	102.3	7800	.236
1.6	8.32	133.12	.92	5052	109.2	8320	.252
1.7	8.84	141.44	.99	5148	116.0	8840	.268
1.8	9.36	149.76	1.03	5293	122.8	9360	.283
1.9	9.88	158.08	1.10	5485	130.0	9880	.299
2.	10.40	166.40	1.15	5630	136.4	10400	.315
2.1	10.92	174.72	1.21	5726	143.3	10920	.331
2.2	11.44	183.04	1.27	5870	150.0	11440	.348
2.3	11.96	191.36	1.32	6015	157.0	11960	.362
2.4	12.48	199.68	1.38	6111	163.7	12480	.378
2.5	13.	208.	1.44	6255	170.0	13000	.390
2.6	13.52	216.32	1.50	6399	177.4	13520	.409
2.7	14.04	224.64	1.56	6592	189.0	14040	.425
2.8	14.56	232.96	1.61	6640	191.0	14560	.441
2.9	15.08	241.28	1.68	6784	200.0	15080	.456
3.	15.60	250.6	1.72	6833	204.0	15600	.471
3.1	16.12	257.92	1.80	6977	211.5	16120	.490
3.2	16.64	266.24	1.84	7073	219.0	16640	.504
3.3	17.16	274.56	1.39	7200	225.1	17160	.520
3.4	17.68	282.88	1.96	7266	230.7	17680	.536
3.5	18.20	291.20	2.01	7410	238.8	18200	.551
3.6	18.72	299.52	2.08	7554	245.6	18720	.567
3.7	19.24	307.84	2.13	7602	252.4	19240	.583
3.8	19.76	316.16	2.20	7747	260.0	19760	.600
3.9	20.28	324.48	2.25	7843	266.1	20280	.614
4.	20.80	332.80	2.30	7939	272.9	20800	.631
4.1	21.32	341.12	2.36	8036	280.0	21320	.646
4.2	21.84	349.44	2.42	8180	286.6	21840	.661
4.3	22.36	357.76	2.46	8276	297.0	22360	.677
4.4	22.88	366.08	2.54	8324	300.3	22880	.693
4.5	23.40	374.4	2.58	8421	307.0	23400	.709
4.6	23.92	382.72	2.65	8517	313.9	23920	.724
4.7	24.44	391.04	2.71	8613	320.7	24440	.740
4.8	24.96	399.36	2.80	8709	327.5	24960	.753
4.9	25.48	407.68	2.83	8757	334.2	25480	.773
5.	26.00	416.00	2.87	8854	341.2	26000	.789
5.1	26.52	424.32	2.94	8950	348.0	26520	.800
5.2	27.24	435.84	3.02	9046	357.4	27240	.825
5.3	27.56	440.96	3.04	9142	362.0	27560	.835
5.4	28.08	449.28	3.10	9239	370.0	28080	.850
5.5	28.60	457.6	3.17	9287	375.0	28600	.866
5.6	29.12	465.92	3.23	9383	382.1	29120	.884
5.7	29.64	474.24	3.30	9479	389.	29640	.900
5.8	30.16	482.56	3.38	9624	400.	30160	.913
5.9	30.68	490.88	3.40	9667	402.5	30680	.930
6.	31.20	499.20	3.44	9768	409.4	31200	.940
6.1	31.72	507.52	3.50	9816	416.2	31720	.962
6.2	32.44	519.04	3.55	9912	425.3	32440	.983
6.3	32.76	524.16	3.61	9960	431.3	32760	.993
6.4	33.28	532.48	3.67	10057	436.7	33288	1.000
6.5	33.80	540.8	3.73	10105	443.4	33800	1.024
6.6	34.32	549.12	3.81	10201	450.0	34320	1.042
6.7	34.84	557.44	3.87	10297	457.6	34840	1.056
6.8	35.36	565.76	3.92	10345	464.0	35360	1.071
6.9	35.88	574.08	3.98	10442	470.8	35880	1.083
7.	36.4	582.40	4.01	10490	479.0	36400	1.103
7.1	36.92	590.72	4.10	10586	484.5	36920	1.120
7.2	37.64	602.24	4.17	10682	494.0	37640	1.140
7.3	37.96	607.36	4.19	10730	498.4	37960	1.150
7.4	38.48	615.68	4.24	10778	505.0	38480	1.166
7.5	39.00	624.	4.30	10875	511.8	39000	1.181
7.6	39.52	632.32	4.4	10923	518.6	39520	1.193
7.7	40.04	641.12	4.45	11019	525.5	40040	1.213
7.8	40.56	648.96	4.50	11067	532.6	40560	1.230
7.9	41.08	657.28	4.56	11163	539.2	41880	1.242
8.	41.6	665.60	4.52	11211	546.0	41000	1.262
8.1	42.12	673.92	4.68	11260	552.5	42120	1.274
8.2	42.84	685.44	4.70	11404	562.3	42840	1.300
8.3	43.16	690.56	4.76	11452	566.3	43160	1.308
8.4	43.68	698.88	4.82	11500	573.7	43080	1.320
8.5	44.20	707.2	4.87	11548	580.0	44200	1.340
8.6	44.72	715.52	4.96	11645	586.7	44720	1.360
8.7	45.24	723.84	5.02	11693	593.3	45240	1.370
8.8	45.76	732.16	5.08	11741	600.0	45760	1.386
8.9	46.28	740.48	4.16	11836	607.4	46280	1.400
9.	46.80	747.80	5.20	11885	614.6	46800	1.415
9.1	47.32	758.12	5.25	11981	621.0	47320	1.432
9.2	48.04	768.64	5.28	12030	630.4	48040	1.452
9.3	48.36	773.76	5.33	12078	634.6	48360	1.465
9.4	48.88	782.08	5.43	12174	641.7	48880	1.481
9.5	49.40	790.40	5.45	12220	648.3	49400	1.500
9.6	49.92	798.72	5.50	12270	655.3	49920	1.513
9.7	50.44	807.04	5.60	12366	662.0	50440	1.525
9.8	50.96	815.36	5.66	12414	668.3	50960	1.542
9.9	51.48	823.68	5.72	12463	675.5	51480	1.560
10.	52.	832.00	5.74	12511	681.2	52000	1.600

NOTE—Table is based on one cubic foot of water, weighing 62.4 lbs. A column of water 1 inch in depth and 1 square foot=5.2 lbs.

Hot Water Heating by Forced Circulation

By A. J. Purcell, C. E., Little Rock, Ark.

This article is not written with the idea of recording anything new about hot water heating by forced circulation, but simply to give a general idea of the practicable installation of such a system, as the writer is well aware that there are sections of this country where such systems are not in use, and in fact but little heard of by the trade in general, and therefore might be of some interest to the curious ones.

I will therefore try to describe this system as it is installed in the new City Hall of Little Rock, Ark. The source of heat is derived from the District Heating Company's main, laid in the street at the rear of the building. This system is the so-called Schott System, and the lay-out of this building was prepared by W. H. Schott.

To heat this building 10,465 square feet of radiation was installed and the main lines consisted of a 3-inch supply and return, which make a complete circuit of the basement, and of full size the entire length of the circuit. This circuit is so installed that the water, after passing from the supply main and through a riser and belt line on each floor and the radiator attached, has to travel the same distance for each and every riser or branch taken from the main.

The system is equalized, that is, the first water out of the supply main travels just as far as the last water out of the supply main before it can return into the return main. The water in the two mains are flowing in opposite directions and the last outlet of the supply main is where the first inlet of return main enters.

"Bound for Nantasket." An interesting view taken of a few of the delegates from Syracuse, N. Y., at the recent Boston convention. They are: Bottom row, left to right—W. B. Goldie, Hon. J. L. Curran, Wm. Dougherty, Frederick Soper. Top row, left to right—Chas. A. H. Kienzle, James F. Guider, James W. McDonald and T. G. Ward. Photograph by F. E. Fladd, of Rochester, N. Y.

The largest riser line used in the building was 1½ inch, and it supplied 1,500 square feet of radiation. From each riser at and above the floor are the belt lines. Each belt is connected from the supply riser into the return riser. This belt has attached to it an average of 250 square feet and in some cases 300 square feet. The entire belt line is ¾-inch pipe, and cut into this, at the points where the radiator is to be placed and the right distance apart, so that corner angle radiator valves can be connected to the radiator, are ¾x½x¾ tees, and in the belt line between the tees back of the radiator is used a piece of ½-inch pipe. This ½-inch piece forms what is known as the by-pass, and allows a certain amount of the hot supply water to pass on to the next radiator on that belt without having to pass through the radiator in front of it.

Each belt line has a gate valve placed at both the supply and return end close to the riser, so that belt can be cut off entirely from the rest of the system in case of repairs or in event of a breakage. Each radiator is also fitted with a Jenkins disc steam radiator valve, so that it may be shut off and detached from the belt line without interfering with the circulation in any of the other radiators on the same belt.

The first thought that comes to the reader that is not familiar with this system is, pretty small piping for so large an amount of radiation, but that is easily accounted for, as I will explain later; also the fact that there is no attention paid to grading of the pipe lines, that is, to give them a specified pitch. The entire main in this building is hung on a true level from one end to the other, and so are the branches and belt lines.

All branches feeding the risers to second and third floor are taken off the top of the main at a 45-degree angle and the return enters at the side. All branches to the basement radiators are taken straight out of the side of supply main and enter the return main at the bottom on a 45-degree angle. This prevents air binding, which is the only thing one must be on the lookout for when installing this kind of a system.

The reason for all this is the fact that the water is caused to circulate through the piping by the circulating pumps at the central station, and that a pres-

sure of 40 pounds is maintained on the entire system during coldest weather by a small pump set close to the circulating pumps at the "station," so that the temperature may be raised from 120 degrees to 220 degrees if desired.

Regular cast iron radiation is used of the Rococo pattern, screwed nipple being the best to use on account of the pressure being liable to cause the push nipple to leak at times. The tappings at the main in the street to supply the large amount of radiation through this 3-inch pipe were only 3¼-inch taps, and the same for the return.

A thermostatic regulating valve is placed on the main return just inside the basement wall. This keeps the temperature of the water from going above the point the thermostat is set for, and prevents this particular building from robbing the street main of more than its share of hot water.

This system, like all others, has its good and bad features. It does away with attendance and the cost of handling ashes and coal and general maintenance and the cost of first installation is considerably smaller than with an independent plant of one's own, as the largest main pipe need not be over 1½-inch in the ordinary dwelling house. On the other hand, one can get heat only when the central station is running, and that is a stated time or season. If chilly weather or unseasonable weather comes outside the limited time, one has to grin and bear it. If the street main breaks, no heat can be furnished before the main is repaired, and if anyone plans to install his own plant after having tried the district system awhile he will find that he must change the whole piping system, as the piping will not be large enough for a gravity hot water job.

However, Little Rock has a large number of buildings that are heated from the central heating plant, both residences and business buildings. The largest building in the state, a ten-story office building, was heated successfully with it the past winter. This called for a higher pressure on the system than is usually put on one, and it is an open question if there won't be trouble on account of breakage after a few years' use.

Useful to Him.

Castro, even in acrimonious mood, upheld the press.

"I'm engaged in defying the world," he said.

"What's that got to do with it?"

"I'd like the world to know it's being defied, that's all."—Philadelphia Press.

A bore is a man who talks about his own motor car when you want to talk about yours.—Lippincott's.

The Value of Organization Among Master Plumbers*

By William Mitchell, Springfield, Ohio

Place the Plumbing Trade on a Higher Plane

Few of us, I think, comprehend the greatness of our organization; we may count the numbers, but can we estimate the accomplished good? Can we value the new inspirations and incentives for greater application and larger appreciations; the better ways by interchange of thought, for greater accomplishments, and yet above all of these, the enlargement of the life and the broadening of the man? Still I am sure that this association of master plumbers of the State of Ohio is not great so much for what it is as for what it may become. The problem of evil is an ever present tragic element in human life. Everywhere it must be faced in some form. No one lives long in this world without coming to the consciousness that some things are right and some things are wrong. With the knowledge of this distinction comes the equally clear conviction of obligation to choose and to do the right. Choice of right implies opposition to all wrong, and we must not expect harmony between the two. And so I wish to inquire first, who will make us great—great as we should become? Will it be the selfish, or the charitable; the men with brains and no hearts, or the men with hearts and no brains; or will it be the men with both hearts and brains—in short, will it be the *broad* men, or the *narrow* men?

Union labor denies the boy, so far as it can, his inherent right to learn a trade; an act that we say is *un-American* and an odium to men who live in the higher altitudes of their being. What of the master plumber who denies the faithful journeyman the right to join his craft and association? Is he the fellow to make us great, great as we should become? What of the local association that is found in chaos and despair because some one has

*Essay read at the seventeenth annual convention of Ohio State Association of Master Plumbers, held at Dayton, Ohio.

aspired to become a master plumber? Is such an association to be one of the builders of our future greatness? Should not each man and each local do and be that which it would be all right for every man and all locals to do and be? Or would greater greatness accrue from each being a law unto himself? Is the stress and strain of competition, which signifies the outdoing of the other person, and of all others, and has made of them our platform, to be the foundation stone for our future greatness; or shall our great foundation corner stone be the *Golden Rule?*

Are the associate members of the larger cities, who pounce down upon the helpless ones in the country and make them take every job of size at cost, to be looked to for the dependable helpfulness and for our rightful expectation of future greatness?

In some parts of Kentucky, we are told, the swine run at large and feed upon the nuts that fall from the tree. When a farmer wishes to butcher, he notifies his neighbors to put up their hogs. The farmer then takes his rifle—the field is his—and lands his own.

I wish to propose for your consideration. Do you think it would build up our future greatness if, when our big fat jobs are ready and ripe for the killing we were to notify our neighbors to put up their hogs, only that we might land our own?

Are there not many ways in which business at home could be largely increased in volume and also made more profitable? Could not one's excess time and energies be made a more profitable source of revenue in an earnest and aggressive endeavor to improve conditions than by fighting new aspirants and neighbors? If not a failure in steam or hot water heating (and many plumbers install heating plants) in all of this great State of Ohio were known, would there not be double the demand for such work? If every job of plumbing were entirely satisfactory, would not the demand for such work grow more rapidly? If so, then would not a united endeavor and agreement for a higher standard of work be a profitable alternative for *war?* If everybody were to help everybody else, would it pay? Is it not an awful delusion to suppose that a competitor's failure to install successfully a piece of work will help us, who can do the work? Had he succeeded, would not the architect and owner have lauded the thing itself rather than the man who did the work? And would not the lauding have brought to you your friends for a similar job? Has not the failure killed the business for three squares in every direction, and left you sitting a pessimist and crying "hard times?" Is not the largest element in fight, the fighting and bearing down of the standard of workmanship and material used? Then would it not pay to see the new rival and assist him to hold up the standard; and does it really pay the rover to rove? Is cheapened product and cheapened reputation, which means inferiority all along the line, including a cheaper patronage, to build for us a great future? Or would we the better begin to live nearer to the limit of our possibilities as master mechanics and business men, not as feeble worms of the dust, but as stalwart ideals, clean, broad and charitable men, such as you and I admire and love to see?

A general toning up should pave the way and prepare the public for a willingness to pay us a more just compensation for our services. Does not the character of the men, and the general environment, prepare one and make him willing and ready to pay a big price, even before making inquiry, providing the general tone of the place is high? And is not the reverse true, and do we not expect a low price to be named, and are we not almost unconsciously unwilling to allow big profits when we find ourselves faced by a sort of Weary Willie merchant or clerk, and a generally dingy and spittoon environment? Is true economy stinginess and meanness? May it not be more properly wise expenditure from a broad standpoint? Might it not pay to cleanse up and tone up a little?

Do you say these methods are too slow? Is not everything that is great in life the product of slow growth? Mushrooms attain their full power in a night; oaks require decades. A fad lives its life in a few weeks; a philosophy lives through generations and centuries.

Can we not turn our faces to the future with confidence and trust, and yet be true to ideals, broad, helpful, patient with human weakness, strong to do the right, assisting one another?

Burning coal ashes mixed with an oxalic acid solution was practiced in the public school buildings of New York City last winter, with differing opinions as to results. It is certain that $50,000 was saved on the city's coal bills for the schools compared with the previous winter, but whether this was due to the burning over of ashes or to something else is questioned. The supply committee of the board of education has decided not to make the use of the acid solution mandatory with janitors, but those who will not burn the ashes over again must screen the ashes, and the committee will provide the screens. It is said that probably a majority of the janitors will choose to burn the ashes, and a careful watch will be kept of the results as compared with coal consumption in schoolhouses where the ashes are screened.

When Mrs. Small Bossed the Job

By Guido D. Janes

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Mrs. Small of Ducktown knew more about plumbing than any journeyman plumber in the Western Hemisphere. So when Mr. Small had hot water put into his house for heating purposes, Mrs. Small became foreman of the job at once. Hawes & Davis had the contract, but that was all. They came to the house with radiators, risers, unions, nuts, pipe cutters, stay bolts, and began to install the said heating apparatus.

By diplomacy said Hawes & Davis placed the boiler in its wanted locality without being detected by Mrs. Small, but, when they began to bore holes in the floor and fit floor sleeves, etc., the trouble began.

"I don't want the radiator there," remarked Mrs. Small, as Bill Dyke was locating a radiator con-

He put a pipe wrench to his face.

tiguous to a north window in the parlor; "the heat will saunter up the side of the wall and carry dust onto the wall paper and blacken same up. Place the thing in the fire-place so all said dust will smut up the chimney and not spoil the paper."

"Put the radiator in the fire-place?" remarked Dyke.

"Certainly."

So Dyke placed the said radiator inside the fire-place, but before doing so put a pipe wrench to his face so as to hide a smile. And the work went on, and finally was concluded after the floors looked like a sieve, on account of Mrs. Small's fickleness and the plumbers' generosity. But the plant worked correctly.

In December, however, Mr. Small procured the services of a servant imported from Iceland. Now in Iceland they have fire-places; that is all. So when Mr. Small directed the servant to place a fire

"My gracious," remarked Mr. Small.

in the furnace one morning she imagined that the conflagration should be placed in the fire-place; hence the error. And going into the room where the fire-place was situated laid a fire under the radiator and lighted same. Then she went to get breakfast.

Just as she was cutting the biscuits with the top of a baking powder can, a noise disturbed the stillness of the a. m. that made the residence waltz about a little, and a moment later the back yard was being littered up with brickbats, mortar and pieces of a radiator.

"My gracious," remarked Mr. Small, entering the kitchen, "are you at war with us?"

"No."

"Well, we will war with you, no matter if you do belong to Denmark. There is something rotten there."

"Why?"

"You constructed the fire in the fire-place, and

the result is we are minus a radiator, the top of a chimney, and some early morning rest."

Just then Mr. Dyke came running up to the residence. He entered without knocking.

"I heard the explosion, and thought maybe you'd need me as well as a doctor or an undertaker. I found a piece of radiator way down the street. I knew what happened then. Anyone damaged?"

"No, but come with me."

And Mr. Small, followed by Mr. Dyke and the servant, led the way to the fire-place in the parlor.

"Our servant made an error," remarked Mr. Small, pointing to the remains of the hearth and chimney."

"I see," said Mr. Dyke, placing a cap on the end of the feed pipe that was sprinkling the carpet and furniture with heat and hot water.

"My wife is to blame: I am to blame: the servant is to blame. Fix the new radiator where it ought to go and don't pay any attention to my precious wife. Our wives are sweethearts; not plumbers."

"You are right." Then Dyke placed his pipe wrench up to his face to hide another smile. After which he repaired the error.

There are all kinds of baths made in the world, but this illustration shows some new ones—baths for the feet and the hands used in a sanitarium. The illustration is taken from "Popular Mechanics," of Chicago.

Courtesy is to the business man what beauty is to a woman—a letter of introduction written in a language universally understood.

Questions and Answers

THE MAIN DRAIN TRAP QUESTION.

Salt Lake City, Utah.—To the Editor of "Domestic Engineering." Sir: I was greatly amused to read in your issue of June 13 of the great struggle Plumbing Inspector Burnett, of Melrose, Mass., was making to convince the Board of Health and the public of the utter uselessness of the main drain trap. To think of educated Massachusetts, the "hub of the universe," being so far behind the times as that!

We of the "wild and woolly west" **abolished the main drain trap over ten years ago.** We have a clean, straight, 4-inch opening from the sewer "Y" to 18-inch above the roof, and the draft upward would blow out a lighted candle, if it were held at the opening on the roof.

This office is connected with the Board of Health, and we hope that Mr. Burnett will be successful in convincing the Board of Health in Melrose, Mass., that the main drain trap is a delusion and a snare.

Rule "C" in our plumbing code reads as follows: "No trap or any manner of obstruction to the free flow of air through the whole course of the drain and soil pipe shall be allowed, and any plumber who shall, directly or indirectly, place or make any trap, contraction or other obstacle anywhere in the course of such drain or soil pipe, shall, in addition to the penalty herein prescribed, forfeit his license, and shall be ineligible to relicense for one year. Any person violating this rule shall be subject to the penalties of this chapter and shall in addition pay the cost of rectifying the wrong done."

This paragraph shows what would happen to a plumber that would undertake to use a drain trap or any other kind of a contraption in the whole course of the drain or soil pipe. Besides the penalty quoted in "C" there is another of $100 fine and 100 days imprisonment, one or both; the judge will decide.

John W. Farrell, City Plumbing Inspector.

A QUESTION ABOUT VENTILATING TOWERS.

Rochester, N. Y.—To the Editor of "Domestic Engineering." Sir: In our city we are troubled a great deal by property owners' complaints of the stenches that come from surface laterals. We do not trap the surface laterals in our streets because gases in our main sewers have sometimes caused explosions. Can you suggest a remedy? Do you think that ventilating towers would overcome this nuisance? We are still using the trap and air vent on the house drain.

G. D. G.

Answer.

Ventilating towers have not proven a conspicuous success in solving the problem of sewer ventilation. The area of the sewer to be ventilated is so large in aggregate that the towers will have to be very numerous or very large in capacity, or the velocity of the movement of the air through them will have to be so great that there will be a tendency to form a vacuum on the sewer side of the main trap on the house drain. In our judgment the better solution of the problem will be the abandonment of the main trap on the house drain, and we believe we have no other solution available.

In Early Days—X

By Herbert S. Renton

Memories from the Pioneer Days in the Plumbing Trade

A strange compact was made by five of the first plumbers in New York City, first in point of time and first as to standing and ability. It outdid any Mormon ceremony of sealing, for it was an agreement to seal each other up in lead-lined coffins. Whoever passed on first was to be sealed up and the lead casing soldered by the survivors. Stephen Philbin, Jos. P. Quinn, Alex Eagleson, Alex Mackenzie and William Rhodes were the sealers, and they faithfully performed the work agreed upon until the last one departed, and he was sealed by other hands. Lining coffins with sheet lead was part of a plumber's business, as I have pointed out in a former article in "Domestic Engineering."

Philbin started first in John street and moved to 12 Dey street. Philbin & Quinn were located in later years in Fourth street, near Broadway. When they dissolved partnership, Jos. P. Quinn carried on the business alone, moving across the street. Philbin had always an independent establishment for the sale of gas fixtures. It was in Broadway, near Fourth street, and also in Mercer street at one time. Quinn had no interest in this business. Gas fixtures were all made in England before the war, and were heavy and clumsy enough. I knew Quinn, who was a stout man with a genial lisp and stutter. His partner, Philbin, I knew only by sight. He was of medium size, very quick and active, a man of great energy and the richest of the five. He wore side whiskers (designated later as Burnsides), like the actor, Lester Wallack, who set the fashion in those days. Alex Eagleson's shop was in Broadway, opposite Waverly place. He finally drifted out of business and into the Health Board. Alex Mackenzie was quite a character. He held forth in Greene street, near Fourth street. Wm. Rhodes, the other member of the Sealing Club, conducted business in Broadway, near Prince street, the firm being originally Patterson & Rhodes. Eugene A. Philbin, a son of the president of the club, was district attorney of New York County in 1901, and was the predecessor of W. T. Jerome in that office. The politicians couldn't handle him. He made an honorable record as an incorruptible public officer. He is one of the Board of Regents, and holds a place in many prominent organizations.

I have a record of two New York plumbers before 1842, when the water was introduced—James R. Walter and Chas. Pitt. Most of the original members of the craft worked for Walter, whose shop was on Broadway, near Reade street. It was principally storage cistern work and pumps that kept a shop going in antebellum days. Plumbers made their own pumps, and they were not double-action either. Bath tubs were very scarce—lined with lead, and sported only by the rich. A bath in a lead-lined tub must have put as much lead smudge on the patient as the water removed of other substances. A cistern in the attic supplied the bath tub, when there was one.

The reason that I chronicle the names of the old-time plumbers is that there is no record to be found of the pioneers in the trade, and there are only a few of the Nestors of the trade left who remember anything about them, and their very names will be lost if we do not preserve them.

John Montgomery, John Byrnes and James Muir are about all of the old guard left. I might add two or three more, like Edward Murphy, the first preceptor of the trade school established by Mr. Auchtermuchty. Edward Murphy is, to my mind, the best plumber in the United States—at least, there are few to equal him. Then there is Thos. H. Van Tine, whose shop is rated second to none—but I cannot think of Murphy and Van Tine as old-timers; they are always so "blooming" young. But so are James Muir at 79, and John Montgomery, who has been an employing plumber for fifty-seven years, and John Byrnes, who talks of the Astor Place Riots in 1849 as though it were yesterday. John Byrnes, of Lexington avenue and Fifty-ninth street, was a customer of my father's in 1869, and that seems long enough ago. The firm was Byrnes & Bryan, and the shop was at Grand and Clinton streets. They made ale pumps, as well as water fixtures, and many a thousand pounds of brass went from our foundry to their emporium.

John Byrnes "carried the bag" for Col. Geo. D. Scott, the first president of the National Association of Master Plumbers, and both worked for Philbin & Quinn. Col. Scott, of the Eighth Regiment, was one

"Off to the Boulevards." Here we find a body of good fellows about to motor through the beautiful parks and boulevards about Boston. Do you know them? Chas. A. Campbell, of Watertown, and Chas. E. Ames, of Syracuse, are seen on the side lines. The photograph was taken by F. E. Fladd, of Rochester.

of the finest men the plumbing trade ever knew. He is now just drifting out of life, and when his old helper, John Byrnes, calls to see him, he does not distinguish who it is. John Byrnes has always been a prime favorite with his brethren of the trade. Twenty years ago the National Association of Master Plumbers presented him with a set of resolutions in an immense, but very ornate frame. Mr. Byrnes gave me an order to make an iron scroll work frame, eight feet high, on which to rest the memento of the respect and affection in which their president, John Byrnes, was held by his fellow-craftsmen. I thought as I witnessed the unveiling in the parlor of Mr. Byrnes' beautiful home, how different from the spirit of detraction and contumely which had prevailed a few years before that time! Truly, the associations, local and national, have done much for the plumbing trade in bringing about a better state of things.

One of the fine old-time plumbers for whom John Byrnes worked in his younger days was Thos. Carter, whose shop, when I knew him, was in Bleeker street, near the Bowery. He did the plumbing in Castle Garden, where Jenny Lind was first introduced to the American public by the irrepressible P. T. Barnum. In Thos. Carter's days, the **"work was done;" now the fixtures are installed.**

Thos. Carter, John H. Butcher and his brother Jacob, who was not a boss, but a splendid workman, have not been with us for many a year, but John Montgomery, who began business for himself in 1851, is hale and hearty. He was in Grand street, near Broadway, and in 1857 changed to Broome street, removing again to Ninth street, where he was for thirty years or more. His present shop is at 15 East Eighth street, and there you may see models of syphon closets that antedate any of the early "syphon jets." His son Archy is responsible for a No. 1 syphon, and as he made no secret of it, some one may have profited by his invention. John Montgomery showed me a stop which came from England, and which had been in his window, in the various shops, for fifty-five years. He might call it **Exhibit One.** It was for use in an old-style closet. It is a treat to talk to Mr. Montgomery about old times. He belongs to the real old stock—downright, honest as the day—a real rest cure for the fevered worker of our own strenuous time is that serene man of many years' experience. It is really something to wonder at when you think of a man fifty-seven years in business in one city and still happy in his work. He learned his trade with Miller & Coates, who were plumbers before they were importers and jobbers. All honor to John Montgomery!

The other day a journeyman plumber who had worked in one shop forty-two years passed in his time-book and quit forever. His name was Washington Smith, familiarly known as Wash Smith. He had worked for James Muir for forty-two years. One of Mr. Muir's first apprentices, Alexander Farmer, still works for him, and it is now fifty years since he started. Fifty years in one shop is, I think, unparalleled in the United States, at least. Mr. Muir came from Edinburg, Scotland, in 1848, and learned his trade with Peter Milne, Fulton street, near Hicks, Brooklyn. Peter Milne did business before water was introduced in Brooklyn (and it was ten years after Mr. Muir began to serve his time before the Ridgewood water was brought in). Peter Milne, Jr., a son of Peter Milne, was water purveyor in 1884-5. There were only two plumbers in Brooklyn (cistern plumbers). Hudson was one, Milne the other. Thomas Hudson, known as a plumber in later years, was a brother of the original Hudson, who went to California before 1853. In 1853 James Muir went to the Pacific coast and worked in the United States mint as a plumber. He helped to put in the pipes at the San Francisco mint, and had charge of the work. Returning east he commenced business for himself in Eighteenth street, corner of Broadway, in 1857. The building was 874 Broadway. He has been at 27 East Twentieth street for twenty-three years.

His foreman, James Morrow, has been with Mr. Muir for thirty-eight years. He reminded me recently that the first flushometers used in New York were his (Mr. Morrow's) idea, and that I had worked it out for Mr. Muir, who put fourteen of them in the very Manhattan Bank building, 40 Wall street, which had been originated by Aaron Burr's Water Company, as detailed in last week's issue of "Domestic Engineering." They had always worked perfectly. I had never seen them after they were placed.

Mr. Muir is doing work now in a house owned by one of his first customers, and the day I saw him Alexander Farmer, the workman who had been in his employ for fifty years, was working on that particular job. Mr. Muir has done work for three generations of the same family. The other day a baby was born in one of these same old families, and Mr. Muir was asked if he intended to do work for the **fourth generation!** The Holland House, St. Mary's, Sloane Maternity and the Cancer hospitals, the American Bank Note Company building, Commercial Cable and Dunn buildings, with scores of fine residences like that of Cornelius Vanderbilt at Fifty-seventh street and Fifth avenue and Elbridge T. Gerry at Fifth avenue and Sixty-first street, attest the quality of the work done in the old shop. From the very first Mr. Muir has paid all bills by the fifteenth of every month. He told me that he had made up his mind to do business that way, and no collector was allowed to come into his place. I know a few plumbers and other people who do not strictly follow a rule such as this. Elbert Hubbard says: "Don't try to reform the world or lift up the fallen; pay as you go—that's what the world needs." It would have been worth at least a dollar and a half to me if I had grasped Mr. Muir's idea when I was young. The long credit system had great charms for me until I discovered by bitter experience that without capital or good luck it is a delusion and a snare. James Muir at 79 is as lively as a cricket, and one thing is certain—the swift pay system has not hurt his digestion.

One of the old-time plumbers was Martin Lalor, who had a plumbing bazaar on the Bowery, near Fifth street. He had a young Irish clerk named Alex McSorley, who wrote a beautiful hand, which same hand he played for high stakes and finally succeeded his old boss as owner of the shop. When he was still a boy at Lalor's he reported a little shop incident as follows: "Brough was here, sir, kickin' up a shindy about solder,

sir!" Some of the apprentices heard him, and they delighted to congregate in the cellar and roar: "Brough was here, sir, kickin' up a shindy about solder, sir!" Again they would get together on the other side of the street and yell the same thing, but McSorley kept on the even tenor of his way and owned the shop at length —while some of his tormentors were still "kickin' up a row about solder." I knew McSorley well, and a nicer man to do business with was not to be found in a day's walk. Years ago he went into building operations and quit plumbing. I believe he has gone on into the shadows—genial, shrewd Alex McSorley.

Ship plumbing was a trade by itself and legend tells of one Hillsburg before the acqueduct opening in 1842. But the king of that ilk was Alfred B. Sands, whose shop for many years was in Beekman street. His son, Louis P. Sands, made pumps, the firm being Sands & Baxter, of Reade street. Another son, Rodman Sands, has for twenty-five years been the treasurer for Wm. H. Hussey & Son, the long established plumbers' supply dealers of Thirty-fifth street. Alfred B. Sands had retired several years before his death in 1901. The business is carried on at 22 Vesey street by another son, Ernest P. Sands, under the title of Alfred B. Sand's Son Company. The firm deals in ship supplies and yacht fixtures only, having abandoned plumbing altogether.

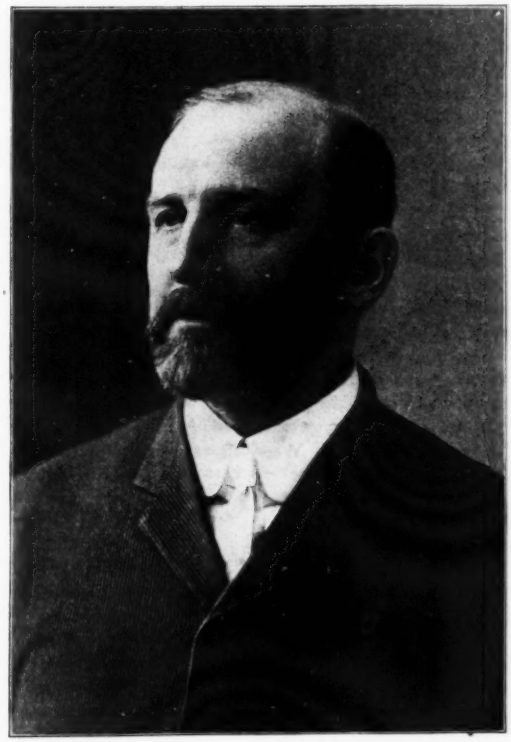
Two firms among the very oldest of the plumbing guild in New York were Butcher & Reed and Ivers & Duff. I have referred to both Butcher and Ivers in a former number of "Domestic Engineering." Then there was James Henderson, of Sixth avenue. Years ago Mr. Nicholas Gerity retired from his business in Third avenue and Seventy-second street with a competence. He was a fine business man and of great native ability. He relinquished the cares of a large business and spends his time in travel and observation. When I last saw him a year ago he related some of his experiences as a youth sixty years ago. He had seen the elder Booth play at the Chatham Theater. That was in 1850. Mr. Gerity in his old age is an art critic and one of the frankest and most open-hearted men I have met with in my pilgrimage. It is worth a good deal to have known him and the other sterling characters whom I have mentioned and who were acquainted with the first members of the Plumbers' Guild.

Some of the older firms I have not mentioned, as my subject was of the earliest men in the business, those of the forties and fifties. Wm. Young & Brother, of Fifty-ninth street; James Kirkwood, John McCarron, John Renehan and others I remember were in a large way of business thirty years ago and are abreast of the times today. Wm. J. McDermott, of Lexington avenue, I knew in 1881, when he was with Timothy O'Brien, but he is good for fifty years yet. Tim O'Brien learned his trade with Alexander Eagleson of the original Sealing Society. Recently James Gilroy, of Park avenue, retired from business after a successful career dating far back in the last century, but most of the representatives of a somewhat later day who might rate as old-timers are either dead or dead broke.

Don't get angry—nothing in it.

Massachusetts Master Plumbers' Annual Fall Meeting

Springfield, Mass., October 21.—The members of the Massachusetts State Association of Master Plumbers surprised even themselves today with the unusually large number of members who turned out to attend the annual fall meeting. In the past the fall meetings have been rather poorly attended affairs, although none the less interesting, but today when the count of noses was taken it was found that sixty-six delegates had presented credentials. Lowell had the largest representation outside of Springfield, there being eleven master plumbers from that city in the hall. There were ten



DAVID CRAIG, OF BOSTON.
Formerly President of the National Association of Master Plumbers.

Boston men on hand, and all the other cities had smaller numbers. The list included most of the old "regulars" whose faces are seen at every convention and whose words are always listened to with interest by the younger men of the craft.

David Craig, of Boston, former national president, **was one of the first on hand, and he was followed closely by Messrs. Kelley and Cronin,** of Boston. **T. J. Ryan,** of Springfield, was on hand to welcome the visitors, and he let his voice be heard at frequent intervals during the day.

The meeting, the forty-eighth regular convention of the association, was called for 11 o'clock in Cooley's Hotel, close beside the Boston & Albany depot on Main street. Several of the delegates had spent the night in the city, attending the theater the night before. After the theater party R. J. Fitzgerald entertained them with sleight-of-hand tricks.

President J. W. Kennelly of the association, who is a Springfield man, with half a dozen of his associates, was on hand at the hall to welcome the visitors as they arrived this morning, and at 11:30 o'clock he **called the meeting to order.** The only business of the morning was **the address of welcome by President Kennelly,** in which he told of his pleasure at having his fellow members guests in his home city. He named **Robert Wilson,** of Springfield, as **sergeant-at-arms,** and the following as **credential committee:** R. J. Fitzgerald, of Springfield; Thomas E. O'Day, of Lowell, and Edwin Connell, of Somerville. They found fifty-two delegates on hand, but later in the day fourteen others reported, making a total of sixty-six in attendance.

The convention adjourned for an hour for dinner, which was provided by the entertainment committee and was served in the banquet hall of the hotel. The menu was a very elaborate one.

At 2 o'clock the convention was once more called to order and business was done with a rush from then until 5:30 in the evening, when the convention adjourned.

Several letters of minor importance were read by the president and ordered placed on file for reference.

The committee appointed at the last meeting to investigate and **assist members of the association, burned out in the great Chelsea fire** of April 12, reported that $25 had been given each unfortunate member. Those assisted were Joseph W. Buckley, C. N. Carter, H. J. Ritterhaus. All of these men lost not only their places of business, but their homes as well in the flames. The committee of assistance was composed of John P. Drury and John F. Cabeen, of Boston.

It was brought to the attention of the convention that the journeymen plumbers of the state had voted to petition the governor for **the appointment of a state board of plumbing examiners** and the legislative committee of the association was instructed to assist in securing the necessary legislation for the appointment of such a board.

A letter from the International lecture institute of New York city was placed on file.

One of the most important matters to be considered was the set of **trade resolutions presented by former National President David Craig,** of Boston. These were in reference to the ever increasing practice among wholesalers and jobbers of **selling plumbing supplies to individuals** as a matter of friendship, and the consequent infringement on the rights of the small dealer. After much discussion a committee of three members was appointed to draw up resolutions. This committee consisted of Mr. Craig, C. H. Cronin and A. F. Curtin. Later in the afternoon they presented the following resolutions for the consideration of the meeting:

"Whereas, the policy of wholesalers in selling supplies to friends and billing the goods to plumbers who install without a profit threatens the protective trade policy of this association,

"Be it resolved, that such selling of goods be a violation of our trade resolutions, whether the plumber installing the same be in sympathy with the association or not."

These resolutions were referred to the president and secretary, who will take the matter up with the national association.

President Kennelly, on behalf of the state association, extended the thanks of the association to the individual members who helped in the entertainment of the delegates and guests at the annual convention of the National Association of Master Plumbers which was held in Boston in the early summer.

A new standing committee, to be known as the **committee on by-laws,** was named by the president. It consists of V. R. Donovan, of Brockton; W. J. Hyland, of Springfield, and John P. Drury, of Boston.

Andrew F. Curtin, of Medford, president of the Boston Association, called to the attention of the convention the fact that **no provision is made for plumbing inspection in state and county buildings and reservations. In the case of the new comfort station being erected by the state in the Middlesex Reservation at Medford the local inspector, after visiting the premises, was told that he had no right to interfere.** The work, Mr. Curtin said, is in direct violation of the specifications. J. A. Larraway, of Winchester, backed up Mr. Curtin in his remarks, and said that in the Medford case a hole had been dug beneath the center of the building, into which the refuse from the sink drains and closets was emptied.

After considerable discussion it was moved that **the executive board wait upon the governor and request that the matter be taken care of.**

E. C. Kelly, of Boston, moved that the executive board wait upon the governor and request that **all state plumbing contracts be made direct** instead of being a part of the general contract, as at present. This motion was adopted.

Secretary John P. Drury reported a healthy gain in the financial condition of the association, the amount received during the year having been three times as great as the collections of the year previous.

A vote of thanks was extended the Springfield association on motion of V. R. Donovan, of Brockton, for their entertainment. The thanks were responded to by T. J. Ryan, of Springfield.

C. H. Cronin moved a vote of thanks to the trade press, which was passed.

The meeting then adjourned at 5:30 o'clock.

Delegates in Attendance

Boston:—Michael Ahearn, H. H. Collin, John Crawford, David Craig, C. H. Cronin, John P. Drury, E. C. Kelley, F. F. Muldowney, Thomas E. Shampe, L. W. Stevens and John K. Tully.

Brookline:—D. T. Harrington and James P. Mahon.
Brockton:—V. R. Donovan.
Chelsea:—Joseph Locke and I. J. Waters.
Easthampton:—James P. Ryan.
Gardner:—John R. Carey.
Holyoke:—C. P. Lyman.
Leominster:—Frank S. Farnsworth.

Lowell:—Michael Carroll, W. F. Farrell, Charles H. Hobson, William H. McElholm, Thomas E. O'Day and P. J. Welch.

Malden:—Frank P. Kenney.

Medford:—Andrew F. Curtin.

North Adams:—Louis A. Hebert.

Somerville:—Edwin Connell and J. J. Fisher.

South Framingham:—James Sheldon and J. P. Welsh.

Springfield:—James J. Cotter, L. W. Dunlap, R. J. Fitzgerald, J. G. Howland, William J. Hyland, A. J. LaFleur, J. W. Kennelly, William J. Kennelly, P. J. Ryan, George Smith, James F. Walls, Jr., Weylan Brothers and Robert Wilson.

Taunton:—W. R. Park, Jr.

Uxbridge:—E. G. Conant.

Westfield:—W. A. Blakeslee.

Whitinville:—Levi Rasco.

Winchester:—J. A. Larraway.

Worcester:—Charles R. Campbell, H. A. Desper, F. P. Gilbert, William H. Holmes, O. S. Kendall, J. C. Luby, A. E. McDonald, Theodore J. McManus, M. J. Maher, V. J. O'Donnell and C. J. Ostberg.

With the Jobbers.

William C. Skulley, vice-president of the **Sanitas Manufacturing Company,** of 54 Union street, Boston, was a visitor at the convention. He had an exhibit of the Donovan floor drain trap and sand arrester, made by the company, located at the right of the president's desk, where he gladly demonstrated it to all who were interested. He also presented each delegate and guest with a neat little leather card case and bill folder, which was much appreciated.

Arthur Pilchner, of the New York office of **the H. Mueller Manufacturing Company,** of Decatur, Ill., took occasion to run over to Springfield to show the Massachusetts plumbers what his company is doing. He has a valuable and much appreciated souvenir to present in the form of a pack of playing cards, which helped enliven the return of the delegates to their homes.

Among the other exhibitors and demonstrators were: **T. J. Collins,** of the **F. W. Webb Manufacturing Company,** of Boston, and **Messrs. Milligan and Kelley** of the **W. B. Hubbard & Sons Company,** of Boston. Each had interesting literature to distribute, which received due attention from the delegates.

Some Sidelights on the Convention.

John P. Drury, the secretary of the association, was as smiling as ever, and, as usual, ready and willing to aid the representatives of the trade press in collecting their data.

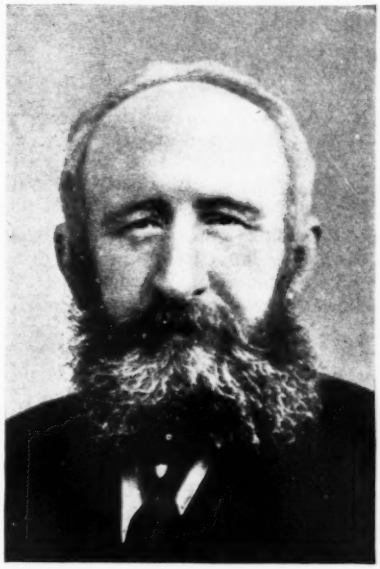
T. J. Ryan, of Springfield, who is president of the plumbing company bearing his name, was able to attend the meeting, although he has not yet fully recovered from his recent disability.

That the Massachusetts state association is a model one is shown by the request which was received from the Illinois state association for suggestions. The members of the Massachusetts body are always willing to lend a hand in the furtherance of the master plumbers' interests.

The wise counsel of David Craig, former national president, was listened to by the members and taken heed of. Mr. Craig's remarks are always of interest, and the members are always willing to give way to him.

A. H. French.

Who's Who in Britain—IV



A. B. Dyson, of Halifax, England, was one of the earliest members of the National Association of Master Plumbers of Great Britain, and has been its treasurer almost from its inception. He was for many years a member of the District Registration Council of the Worshipful Company of Plumbers, of which he acted as vice-president for a time. He is also treasurer of the National Association of Master Plumbers' Accident Insurance Company and of the Confederation of Plasterers, Slaters and Plumbers.

Wholesale Plumbing

ANNUAL MEETING OF THE CENTRAL SUPPLY ASSOCIATION.

The annual meeting of the Central Supply Association was held this week at the Auditorium hotel in Chicago. The executive committee was in session on Tuesday, and the association held its meeting on Wednesday. The importance of the meeting brought a large attendance. New officers were elected, and this, together with the routine business to be transacted, made the event interesting.

Officers Elected.

The officers were all re-elected for the ensuing year, as follows:

President: Samuel H. Moon, of the Ahrens & Ott Mfg. Co., Louisville, Ky.

First Vice-President: William Ivy, of the N. O. Nelson Mfg. Co., St. Louis.

Second Vice-President: Geo. H. Garton, of the W. B. Young Supply Co., Kansas City, Mo.

Treasurer: Edw. F. Niedecken, of the Hoffman & Billings Mfg. Co., Milwaukee, Wis.

Secretary: Paul Blatchford, 1524 Tribune Bldg., Chicago.

Executive committee: The president, the vice-presidents, the treasurer, and the following: James M. Young, of the Fort Pitt Supply Company, Pittsburg; J. B. Rahm, of the United States Supply Company, Omaha; P. J. Frey, of the Central Supply Company, Minneapolis; John D. Hibbard, of the John Davis Company, Chicago.

New Members.

The following concerns were elected to membership:

Northern Brass Manufacturing Company, Waukegan, Ill.

S. Wilks Manufacturing Company, 3517 Shields avenue, Chicago.

National Plumbing & Heating Co., 58th and State streets, Chicago.

Members in Attendance.

The following members were represented, as indicated:

Anderson, Ind.: I. E. May, of the May Supply Co.

Birmingham, Ala.: C. H. Colvin, of Colvin Mfg. Co.

Chattanooga, Tenn.: F. H. Caldwell, of Cahill Iron Works.

Chicago: The W. D. Allen Mfg. Co.; Geo. E. Downe, F. R. Mason, J. A. Sheahan and A. K. Root, of American Radiator Co.; John Ellis, of Chicago Slate & Mantel Co.; E. Buehler, of Davies Supply Co.; H. M. Haldeman, C. D. Little and W. T. Cotter, of Crane Co.; John D. Hibbard, of John Davis Company; Stephen Deschauer; A. D. Sanders, Jr., of Federal-Huber Co.; O. F. Kropf and Geo. I. Blowers, of Findeisen & Kropf Mfg. Co.; Norman Whitelaw, of Holland Radiator Co.; J. R. Steneck, of Illinois Malleable Iron Co.; Jas. Mackay, of the Kellogg-Mackay-Cameron Co.; C. E. Van Court, of Mark Mfg. Co.; H. G. Nye, of the Nye Tool & Machine Works; A. E. Stringer and W. A. Ratcliffe, of Republic Mfg. Co.; J. J. Ryan and Geo. P. Stannard, of J. J. Ryan & Co.; C. D. Street, W. J. Street and Wm. B. Dale, of Street & Kent Mfg. Co.; I. Weil, of Weil Bros.; James Weir, of Weir & Craig Mfg. Co.; Chas. A. Ford, of Whitney & Ford; H. M. Sedgwick, of the S. Wilks Mfg. Co.; John F. Wolff, of the L. Wolff Mfg. Co.; C. C. Todd, of the Central Foundry Co.; E. C. Garrity, of the National Plbg. & Htg. Supply Co.; W. S. Verity, of the Standard Sanitary Mfg. Co.; E. A. Stark, of the U. S. Heater Co.

Cincinnati, Ohio: David C. Jones and C. T. Bowes, of Lunkenheimer Co.; Merkel Bros.; C. K. Thomas, of the D. T. Williams Valve Co.

Cleveland, Ohio: W. G. Callow, of the Kennedy Company; Adam Welker, of the Sanitary Co.; C. A. Carothers, of the Standard Mfg. Co.

Davenport, Ia.: Fred Wernentin, of the Midland Supply Co.

Denver, Colo.: Atkins-McGee Supply Co.; C. G. McKenna, of the M. J. O'Fallon Supply Co.

Des Moines, Ia.: L. H. Kurtz Co.

Detroit, Mich.: H. Romeyn Smith, of the A. D. Mfg. Co.; E. A. Morris, of the Detroit Lead Pipe & Sheet Lead Works; H. I. Lord, of the Detroit Lubricator Co.; E. W. Stoddard, of the Detroit Range Boiler Co.; D. B. Lee, of the Diamond Mfg. Co.; James Harvey, of the A. Harvey's Sons Mfg. Co., Ltd.; Jas. P. Feely, Jr., of Ideal Manufacturing Co.; Penberthy Injector Co.; R. R. Sterling, of the Sterling & Skinner Mfg. Co.; M. G. Pierson, of the United States Heater Co.

Fort Wayne, Ind.: Geo. H. Van Arnam and J. T. Knott, of the Knott-Van Arman Mfg. Co.: Geo. Taylor, of the P. & H. Supply Co.

Fort Worth, Tex.: Chas. Gamer, of the Gamer Co.

Grand Rapids, Mich.: Ferguson Supply Co., Ltd.; R. B. Kellogg, of the Grand Rapids Supply Co.; H. C. Cornelius, of the Wolverine Brass Works.

Indianapolis, Ind.: I. C. Huesmann, of the Central Supply Co.; J. M. Gilchrist, of the Indiana Supply Co.; Henry M. Stackhouse, of the Knight & Jillson Co.; J. H. O'Brien, of the Shirley Radiator & Foundry Co.

Kalamazoo, Mich.: Quinn Mfg. Co.

Kenosha, Wis.: W. J. Frost, of the Frost Mfg. Co.

Kokomo, Ind.: The Columbia Pottery & Mfg. Co.; A. V. Conradt and E. Willard, of the Great Western Pottery Co.

La Crosse, Wis.: John P. Fetter, of the W. A. Roosevelt Co.

Louisville, Ky.: S. H. Moon, of the Ahrens & Ott Mfg. Co.; Geo. H. Laib, of the Laib Co.

Mannington, W. Va.: A. S. Frampton, of the Homewood Pottery Co.

Mansfield, O.: T. R. Barnes, of the Barnes Mfg. Co.

Menominee, Mich.: H. T. Emerson, of Emerson-Corbin Supply Co.

Milwaukee, Wis.: F. R. Dengel, of F. R. Dengel Mfg. Co.; August Seelman, of B. Hoffmann Mfg. Co.; E. F. Niedecken, of Hoffmann & Billings Mfg. Co.; G. S. Waite, of Robert Rom Co.; E. N. Spence, of the Rundle-Spence Mfg. Co.

Minneapolis, Minn.: P. J. Frey, of the Central Supply Co.

Muncie, Ind.: Geo. Keiser & Co.

New York, N. Y.: Norman Howard and B. O. Tilden, of the American Sanitary Works.

Noblesville, Ind.: E. V. Brigham, of the McElwaine-Richards Co.

Omaha, Neb.: J. B. Rahm, of the United States Supply Co.

Peoria, Ill.: Nailon Bros. Co.

Pittsburg, Pa.: J. B. Lantz, of the Anchor Sanitary Co.; Duquesne Sanitary Co.; James M. Young and Joseph E. Lewis, of the Fort Pitt Supply Co.; J. A. Kelly, of Iron City Sanitary Mfg. Co.; H. A. Leslie, of the Kelly & Jones Co.; F. H. Knapp, of Pittsburg Supply Co.; Wm. B. Scaife & Sons; J. D. Purdy, Jr., of Spang, Chalfant & Co.; W. A. Myler, of the Standard Mfg. Co.; Francis J. Torrance and James A. Riordan, of the Standard Sanitary Mfg. Co.; A. H. Cline, Jr., of the United States Sanitary Mfg. Co.

Rockford, Ill.: F. D. Keeler, of the Rockford Brass Works.

St. Louis, Mo.: W. C. Ehrhardt, of the John C. Kupferle Foundry Co.; Wm. Ivy, J. D. McGuire and A. B. Pierce, of the N. O. Nelson Mfg. Co.; H. P. Nelson, of the National Tube Co.

Sheboygan, Wis.: Walter J. Kohler, of the J. M. Kohler Sons Co.

St. Paul, Minn.: Crane & Ordway Co.; P. J. Frey, of the Union Brass & Metal Mfg. Co.; Western Supply Co.

Steubenville, O.: H. D. Westfall, of the La Belle Iron Works.

Sturgis, Mich.: C. A. Miller, of the Miller-Hubbard Mfg. Co.

Terre Haute, Ind.: W. B. Blowers, of the Frank Prox Co.

Trenton, N. J.: E. S. Aitken and R. M. Fielder, of the Trenton Potteries Co.

Waukegan, Ill.: C. S. Johnson, of the Northern Brass Mfg. Co.

Wheeling, W. Va.: Trimble & Lutz Supply Co.

Youngstown, O.: W. E. Manning, of the Youngstown Sheet & Tube Co.

Hedges & Brother, of Newark, N. J., has been incorporated with a capital of $50,000 to conduct a brass foundry. The incorporators are: Edward C. Hedges, M. Ethel Hedges and Alfred W. Hedges.

Quinn Supply Company, of Kalamazoo, Mich, has just announced that it has changed its name to the **Quinn Manufacturing Company.** The concern will carry on the same line of business as heretofore, the only difference being the changed name.

The West Sanitary Specialty Company, of New York City, has been incorporated, with a capital of $50,000. The directors of the company are: Thomas E. Marks and Thomas E. McLeod, Flatiron building; John H. Cooper, Hotel Ansonia, New York.

Metropolitan Brass and Bronze Foundry Company, of New York, has been incorporated, with a capital of $2,000. The directors are: Samuel Schwarz and C. Schwarz, 312 East Eighty-fourth street; Bela Nemes, 306 East Eighty-third street, New York.

The Grace Brass Foundry Company, of Camden, N. J., has been incorporated, with a capital of $10,000. The incorporators are: B. F. Buchanan, Frederick D. Hyde and L. L. Hyde. The company is to mine, import, smelt, etc., copper and its alloys.

H. A. Stevens, Inc., New York, has been incorporated with a capital of $20,000, to deal in gas fixtures. The directors of the company are: Howard A. Stevens, 215 West Fourteenth street; Fred L. Niblo, Empire Hotel, New York; George Wainright, 65 Congress street, Jersey City, N. J.

Holbrook, Merrill & Stetson, of San Francisco, Cal., are having the work rushed on the erection of their four-story and basement building at the corner of Sixth and Bluxome streets in that city, and have let contracts for almost all of the work. The plumbing will be installed by the Healy-Tibbetts Construction Company.

Weather Note.

The naked hills lie wanton to the breeze,
The fields are nude, the groves unfrocked,
Bare are the limbs of shameless trees—
No wonder the corn is shocked!

—John T. McCutcheon in "The Chicago Daily Tattletale."

Wholesale Heating

The Stockham Pipe and Fittings Company, of Birmingham, Ala., whose plant was destroyed by fire some time ago, has just finished the erection of a new plant for the manufacture of steam fittings, etc.

The Beler Water Heater Company, of 627 Second avenue, Pittsburg, Pa., has secured the services of Frederick Gamble, who for a number of years past has been a member of the selling force of the Monarch Water Heating Company, also of that city. Mr. Gamble has accepted a similar position with his new employers, and will call on the trade throughout his old territory.

Judge Buffington, of the circuit court of the United States for the Western District of Pennsylvania, has just handed down a decision in the case of the Fowler & Wolfe Manufacturing Company, of Philadelphia, versus National Radiator Company, of Johnstown, Pa., in which he declares that the National Radiator Company's radiator does not infringe, as claimed by the complainant, and the bill was dismissed.

Metal Market

New York Metal Market, October 27.

Copper, Prime Lake	$13.75-13.80
Copper, Lake, Arsenical brands	13.70
Copper, Electrolytic	13.65
Antimony, Cookson's	8.12½
Lead	4.35
Spelter	4.82½
Straits Tin	29.60

Chicago Iron Market, October 29.

Southern, No. 2 Foundry	$16.85-17.35
Lake Superior Charcoal	19.50-20.00
Lake Superior Coke Iron, No. 2 Foundry	16.50-17.00

October 29, 1908:

Foundry iron was the same price as week previous
$6 less per ton than the year previous
Copper was the same price as the month previous
2½c more a lb. than the year previous

New York, N. Y.—Interest has reacted in the pig iron markets in certain sections of the country, according to "The Iron Age." It is estimated the sales included 12,000 tons of malleable Bessemer to a New England and New York interest, 15,000 tons of foundry iron to a large electrical plant, 10,000 tons to manufacturers of radiators, 14,000 tons to one New York pipe foundry, and 5,000 tons to a New Jersey pipe foundry. There has been continued interest in Bessemer and basic pig in the Pittsburg district, where the markets have displayed symptoms of weakness. Reports on the export markets continue cheerful. With the exception of Japan, the sales and inquiries are growing.

Society Note.

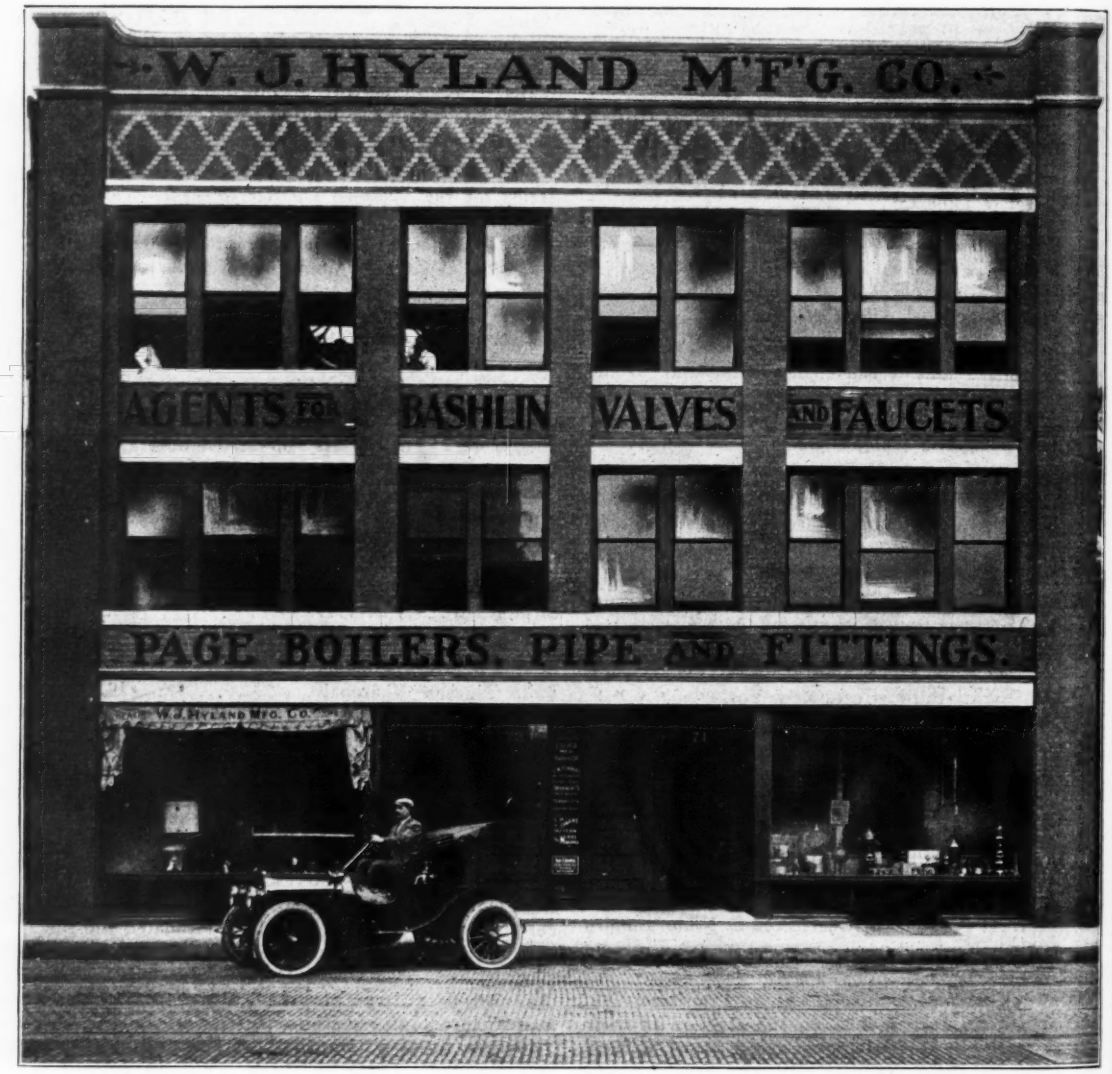
When the Duke of the Abruzzi weds Katherine the fair
Then the whistles down in Elkins
Will make cracks in all the welkins,
And the other girls will simply tear their hair.

Steam and Mill Supplies

Schedules in bankruptcy of the Munoz Boiler Company, of 2 Rector street, New York City, show liabilities of $73,336, and assets unknown, consisting of stock of machinery and patent rights.

directors are: James A. Mooney, 100 Fenimore street; W. Arthur Newman, 974 Bedford avenue, Brooklyn; Edward C. Moen, 52 William street, New York.

R. F. Morse, of 74 Weybossett street, Providence, R. I., who is well known in power plant circles in New England and popular among the engineers in



W. J. Hyland, president of the W. J. Hyland Mfg. Co., of Springfield, Mass., in his new automobile in front of his up-to-date plumbing and heating establishment, which shows enterprise of the kind that is sure to be followed by the desired reward. Mr. Hyland is evidently getting ready for the fall campaign for Bashlin valves, for which he is New England agent. He is one of the most enterprising members of the craft in the East and has worked up an enormous trade in the lines he handles.

The Bay State Belting Company, of Boston, Mass., has moved its store and offices from 119 Franklin to 43 High street, where it has more commodious quarters which are being very handsomely fitted up.

The Journal Lubricator Company, of New York City, has been incorporated with a capital of $50,000. The

that section, has been appointed New England agent for the Cyclone Grate Bar Company, of Buffalo, N. Y.

The Magnesia Company of New England is the title of a new company that has been formed with a paid up capital of $2,200,000 for the manufacture of asbestos and magnesia steam pipe and boiler covering, and

several other magnesia products. The company has acquired the large plant of the old Putnam Mail Company, at Neponset, Mass., near Boston, covering nearly fifteen acres, and are rapidly fitting it up for their use. James D. Rommus is vice-president, Mr. Hopewell, secretary; John A. Qualey, of New York, treasurer, and James W. Reid, general manager. An allied company, the Magnesia Company of America, of which Mr. Qualey is also treasurer, is erecting a large plant near Newark, N. J.

The new two-cent rate of postage put into effect the first of this month between this country and Great Britain, has already had the effect of increasing the volume of such foreign mail by 100%, according to a statement issued by Postmaster Morgan, of New York. To fill a need of American manufacturers for better facilities abroad, a **"Bureau of American Manufacturers in Europe"** has recently been organized, and is open to all reputable American firms. This bureau has leased a large six-story building in the business part of London, England, and foreign buyers visiting that city will be invited to attend the exhibition of American goods which will be carried permanently. A monthly bulletin will be sent to buyers in every quarter of the globe, personal letters will be dispatched to them at frequent intervals, and every mode of advertising consistent with progressive business methods will be employed to make the exhibit a profitable enterprise for the members participating.

Obituary

Joseph A. Stahl, of the plumbing firm of Kieley & Stahl, whose establishment is located at 10 Green street, Albany, N. Y., passed on at his home in that city on Saturday, October 10th. His early death is regretted by all who knew him. The Master Plumbers' Association of Albany, of which he was a highly esteemed member, at a meeting held last week, passed the following tribute to his memory:

In Memoriam.

"Death loves a shining mark" is more than ever realized in the sudden departure from this life of our esteemed and beloved friend and associate, the late Joseph A. Stahl. It was not so long ago that he was an enviable example of health and activity; indeed, his ceaseless labors to fulfill life's obligations—which he did so well—undermined a once vigorous constitution. Now he rests in the peaceful sleep in the silent city of the unnumbered dead. His was a most useful existence and a shining example for us all to emulate; a life that has demonstrated, though "death is inevitable, the fame of virtue is immortal." His sudden summons again reminds us of the uncertainty of human life. We are here today, but for many of us there will be no tomorrow. Our late comrade and friend was one of the few men who possessed those virtues of heart and soul which make for character—which typify true manhood and make lasting friendship a possibility. He was ever courteous, gentle, manly in his every word and action, and possessed of a genial and happy disposition.

His past efforts for our association are a matter of history and challenge comparison. He was ever interested in its progress and development, being always among the foremost in advancing the best interests for its prosperity.

In his death the association has lost one of its best friends, and the void thus created will be forever felt. Though "Our Joe" has preceeded us "down the valley which we are all approaching one by one," yet

"There is no vacant chair. To love is still
To have. Nearer to memory than to eye,
And dearer yet to anguish than to comfort, will
We hold him by our Love that shall not die."

To the bereaved wife and children, and friends, we tender out hearfelt sympathy in this their hour of affliction, and wish them increased strength and every comfort to endure the sorrow which is theirs and which were it possible, we would gladly share.

Frederick W. Ridgway, Timothy E. Kerwin, John E. Dugan, Committee on Memoriam.

Samuel Morris, a pioneer master plumber of Troy, N. Y., passed on at his residence in that city on Saturday morning, October 24. He had been in poor health for some time, but was able to be in the office

The Late Samuel Morris, of Troy, N. Y.

of his plumbing establishment at 2 Second street until three days before his death. Mr. Morris was born in Ireland and came to this country with his parents when he was two years old. His early life was spent in New York City, where he attended the public schools and learned the plumber's trade. In 1861 he came to Troy, and he resided there ever since. His first few years in Troy were spent with the Gas company, after which he engaged in the plumbing business, which he continued up to the time of his death. Mr. Morris took an active interest in politics, having served as alderman and president of the common council for several years in the eighties, and being a forcible speaker, his services were constantly sought by the Republican national and state committees, and he stumped the state

for years and always made a good impression. He is survived by a son, three daughters and two sisters.

John Sherry, president of the Standard Force Lubricator Company, of Rochester, N. Y., passed on at his home in that city last week, after only a few days' illness.

Personal

James Hay, president of the Ruud Manufacturing Company, of Pittsburg, Pa., has returned after a visit and business trip of several months spent in Scotland and other parts of the British Isles.

Herbert S. Renton, of New York City, inventor of several plumbing specialties and author of "In Early Days; Memories of Pioneer Days in the Plumbing Trade," is just preparing to go on his annual lecture tour. This season he will deliver an illustrated lecture on "Memories of the Theater," comedians and tragedians who made the last generation laugh and cry. Mr. Renton gives sketchy descriptions and imitations of the old-time plays and players, and he accompanies his entertainment with 200 rare and excellent pictures.

John J. Vogel, of the plumbing firm of John P. Vogel & Son, of Boston, Mass., and secretary of the Master Plumbers' Association in that city, was married to Anastasia E. Walsh, daughter of Wm. Walsh, a prominent business man of West End, Boston, on Wednesday morning, October 28, at St. Joseph's church. George Vogel, brother of the groom, was the best man, while Mrs. C. H. Cronin, sister of the bride, and the wife of a prominent master plumber in Boston, was matron of honor. The ceremony was followed by a reception at the residence of the bride, after which the happy couple left on a trip to New York and several southern cities. The social position of the groom and bride made the wedding one of the most important social events of the season in West End, Boston.

Plumbing Inspection

Washington, D. T.—The persistency of the local Health Department in going after insanitary cases was forcibly shown to the public in the case of a nuisance on the premises of a Mrs. Liston, in the 2900 block, on Georgia avenue. The latest court case against her for "obstructed sewer" and "failure to provide proper connection," was tried during the past week, and resulted in the aggregate fines of $110. This being the third case against her, the fine was the accumulation of penalty of $1 a day for every day the connection was not made, from the second trial.

Public Comfort Stations

Chicago, Ill.—The Civics committee of the Illinois Federation of Women's Clubs made the following interesting report on Public Comfort Stations, at its annual meeting last week in East St. Louis: "Morgan Park Woman's Club and one other club has established a public comfort station. Twenty-eight have been placed in fourteen of the small parks. Our committee is represented on the United Associations Committee of the city of Chicago on Public Comfort stations, whose matter has been mailed to every club for indorsement and action. The Woodstock Woman's Club is arranging for a public comfort station and many clubs are looking after the comfort stations at their railroad depots and stores."

The Middle States

East Liverpool, O.—E. C. Hawk has the heating contract for the new $7,500 addition that is being built to the residence of Frank Crook.

Chicago, Ill.—The P. Nacey Company, of 317 Wabash avenue, has just been awarded the contract for the plumbing of the Brown-Marx building at Birmingham, Ala.

Vassar, Mich.—The plumbing establishment of C. N. Brett was destroyed by fire on Sunday morning, October 18. The loss is placed at $1,600 and was covered by insurance.

Cleveland, Ohio.—Boehme & Koller is the style of a firm which has just opened a plumbing and gas fitting establishment at 4916 Central avenue. The firm is composed of Chas. D. Boehme and Geo. J. Koller, who would like to receive catalogues from manufacturers and jobbers of plumbing goods.

Notes from the West

Steamboat Springs, Colo.—Stukey Bros., engaged in business at this place, have been admitted into membership in the Colorado Master Plumbers' Association, and a local association has been formed with J. W. Jacques, president; E. O. Furlong, vice-president, and Daniel Stukey, secretary-treasurer.

Little Rock, Ark.—M. B. Sanders has been awarded the contract for the plumbing and heating in the New Capitol hotel. The consideration is $21,000. This is the largest single contract for work of this character ever awarded in this city. Mr. Sanders has also secured the contract for the installation of a hot water heating system in Mrs. John F. Park's residence. The Pettit & Galloway Co. has secured the contract for the heating system in the Terminal hotel; the contract for the plumbing went to A. V. Rogoski.

Contemplated Work

Washington, D. C.—Sealed proposals will be received at the office of the supervising architect until 3 o'clock p. m., November 23, 1908, for the construction of quarters and executive buildings at Gulf Quarantine Station, Ship Island, Miss., in accordance with drawings and specification.

Washington, D. C.—Sealed proposals will be received at the office of the Supervising Architect until 3 o'clock, p. m., December 2, 1908, for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the U. S. postoffice at Carlisle, Pa., in accordance with drawings and specifications.

Correction: Our attention has been called to the fact that only water closets of the Douglas individual seat-action type are being installed in the public school buildings at Pasadena, Cal. In a recent report in our columns it was stated, erroneously, that two other makes were also installed. We regret the error and hasten to make this correction.—Ed.

New York News

Rochester, N. Y.—Caldwell Brothers are engaged with the heating work in the No. 8 public school in this city.

Auburn, N. Y.—H. R. Saunders has contracts under way for the plumbing and heating in three new residences in this city.

Clifton Springs, N. Y.—A. A. Raymond is at present engaged with the installation of a heating plant in the residence of Peter De Plantery.

Rochester, N. Y.—Downs & Dunn, of 495 State street, have recently completed an excellent installation of plumbing work in the St. Bernard Theological Seminary.

Seneca Falls, N. Y.—Wallaven & Dutcher have a good contract on hand in that of the steam heating installation in the new foundry, being erected here by the Climax Specialty Company.

Rochester, N. Y.—A. F. Carey, of Monroe avenue, has recently completed the plumbing in two new double flat buildings for H. C. Wright and similar contracts for the same gentleman in two new single flat buildings.

Rochester, N. Y.—Baker & Co., of 27 Lyell avenue, have begun business with exceedingly good prospects. In addition to a good assortment of residence plumbing, they have contracts on hand for the heating of three new houses and a public school.

Rochester, N. Y.—R. E. Bohrer is building up an enviable business, in spite of the fact that he has been in the ranks of master plumbers but a few years. His latest contract is for the plumbing and heating in the new Polish church on Ernst Place, which will amount to $2,000.

Rochester, N. Y.—W. A. McCormick of 520 State street, has contracts on his books at present for the plumbing and hot water heating in ten new residences in various sections of Rochester. He also has under way two good heating installations at Coldwater, N. Y., and a similar contract at Greece, N. Y.

Rochester, N. Y.—The James Reynolds Company, of Mill street, has an elegant assortment of work in progress. This includes the plumbing in the St. Bernard Theological Seminary, which is being done by day's work. The work being done by the Reynolds Company in this institution will approximate $12,000.

Rochester, N. Y.—The firm of Shannon & Coughlin, of 602 Lake avenue, finds little cause for complaint these days. A good contract has lately been secured by them in that of the plumbing and hot water heating in a new residence for D. D. Lovelace. They have also on their books plumbing and heating contracts for five new houses for Mr. Rosehill and a hot water heating equipment in a new house for Wm. Popp.

Canandaigua, N. Y.—P. B. Downs finds little cause for complaint these days. His books show an elegant assortment of work on hand. Of this can be mentioned an installation of elegant plumbing fixtures together with the hot-water heating in the residence of M. N. Clement. This is being done by day's work and will aggregate $2,200. He is also placing the plumbing in a residence for Mrs. John D. M. Keohme and in the building of the Canandaigua High School.

Rome, N. Y.—John R. Harper is still living up to his reputation as an energetic "always-busy" contractor for plumbing and heating work. His shop is running full time and his pay-roll is as large as ever. In addition to a large assortment of factory and residence work he has recently added to his list a contract for the plumbing, heating and ventilation of the new Y. M. C. A. building under course of construction here.

"A Notable Delegation." These faithful association workers were among the popular delegates to the annual convention held in Boston last July. In the bottom row they are, reading from left to right: Chas. Ames, Fred Soper, T. G. Ward, James McDonald, W. B. Goldie, Chas. E. McCarthy, Wm. L. Benedict. Top row, left to right: John Lavelle, R. Dee Pierce, secretary of M. Glauber & Co., New York City; J. L. Curran, Chas. A. H. Kienzle, E. B. Dunkerton, W. F. Gooley and James F. Guider. Photograph by F. E. Fladd, of Rochester.

Rochester, N. Y.—Thos. J. Brennan has engaged in the plumbing and heating business at 515 State street, where he would be glad to receive catalogues and price lists from manufacturers and jobbers of material in these lines. He has started the ball rolling by securing a $1,000 contract for the plumbing and hot water heating in a new residence for Ernest Yates. He is also engaged with the plumbing of a residence for Thomas Eustace.

Canandaigua, N. Y.—Arthur Sterling has been particularly fortunate the past few months in landing a choice selection of contracts. These include two heating installations at Naples, N. Y., and a similar equipment in a large hotel at Gorham, N. Y. In addition to these he is busily engaged with the heating of the Episcopal parsonage in Canandaigua and with the plumbing installation in the handsome residences of W. S. Hubbell and Mrs. Geo. T. Thompson, also in Canandaigua.

Utica, N. Y.—The firm of Hesse & Sharp is today one of the busiest concerns in Utica. Their books show a large variety of work and additions are being made to the extensive list each week. We might mention the following new structures on which they are engaged: 1 three-family house on Oswego street, 2

two-family houses on Sunset avenue, 3 one-family houses on Churchill avenue, 1 two-family house on Cleveland avenue, 1 two-family house on Andes avenue and 1 two-family house on Park avenue. They are also equipping with steam heat a school house at Newport, N. Y.

Auburn, N. Y.—J. J. Holihan has an elegant contract to his credit in that of the plumbing installation in the new Auburn High School, now under course of construction. His work will aggregate $10,000. Mr. Holihan has recently completed a nice contract of plumbing and heating in the residence of Professor Stewart, of the Auburn Theological Seminary.

Syracuse, N. Y.—Edward Joy has, as usual, an elegant assortment of work on hand. We might mention first a $10,000 contract for the plumbing in the County Alms House. He has recently completed a $40,000 contract for the plumbing, heating and ventilating in the North Side high school, in Syracuse. He is engaged now with a $6,500 contract for the heating and ventilating of the new Elk's Temple, in Syracuse, a $3,500 contract for the heating and ventilating of the Smith Science building at Hobart College, and with a $5,000 contract for the heating of the new Mowry hotel in Syracuse.

Little Falls, N. Y.—John F. Leary continues to get the business. There are but few dull moments in his large establishment. One of the best contracts awarded in Little Falls for some time went to him and consisted of the plumbing and heating in a palatial new hotel being built here. In addition to the plumbing and heating in a sixteen apartment flat building for Hallman Brothers and a handsome installation of plumbing and heating fixtures in an elegant residence at Blue Store, N. Y., he has lately secured another enviable contract for the plumbing and heating work in the U. S. postoffice building in this place.

E. DeForest Winslow.

A MINNESOTA (I)DEAL.

By the New Man

"Ay go bay Mankato" into the farther west & there nestled into a gash in the earth lies a small country town with the streets piled on top of each other, climbing the side of the gorge & spilling themselves upon the plain's beyond. Just a peaceful country village, with a dirty, dusty, long main street, stores straggling along its sides, children whooping & playing; some hotels, a few Americans and—Norwegians—

They dug the nose off one of the hills to get a foot hold for some stores & in one of those shops they planted a fellow to sell some goods & blamed if he ain't there yet—making good too—yes, mighty good—on the job.

If I only had his genial joshing unconscious warm hearted way—Well do you know I believe he could get a tax collector to subscribe for a family newspaper!! One day I was waiting in this store when in comes a husky country woman with blood in her eye & a baby on her arm—

"I want me bill," says she.

"Certainly madam" was the answer—"Just step right down to the desk & we'l look things over—Me brother keeps the books & he writes a very fine hand, but may be I can read it"—So they go & sit down by the desk & he opens up a big grimy ledger that had a sort of "All-ye-who-enter-here-leave-hope-behind" air & they started in—

"Eight cents" yelled he. The woman started & fluttered feebly—She was trying to break loose, but couldn't—His spell was upon her—"What's this" says he—"me brother writes a very fine hand but—"$1.78?, uh huh"—"$3.65?"—"Yes"—"last month $7.28?" "I guess so"—"$12.69 in all Mrs. Snakeroot—I'm mighty glad you came in to day for we need the money & it's so good of you to pay promptly—I'll write the receipt—Me brother writes"—"Say! here's a present for the old man"—"Have you seen our new goods?"

And then he extracts that $12.69 & goes to work & sells her more stuff & when she left the store she was grinning like a "Chessire Cat." Presently an old Norwegian came in. He literally had chaff in his whiskers for he'd been threshing grain. "Yon" was met thusly:—

"Say Yonson have you heard the latest?"

"Nuh" grunted he—

"Well down by Mankato a Norwegian died the other day and they had no money to bury him. So they took up a collection at a dollar ahead—Pretty soon they came to an Irishman & asked him to help out—"An is't a dollar yez want? 'An what fur? says he—

"To help bury a Norwegian" was the reply—

"Here" says Pat, pulling out a five spot—**"Bury four more!!!**

You ought to have heard that old Norwegian roar! Did he buy any goods? I should say **yes.**

What's bothering me is where to point a moral—or isn't there any?

With the Makers

Climax Lock-Joint Plumbers' Woodwork.

Climax Sanitary Company, of Detroit, Mich., manufactures a line of plumbers' woodwork which has attracted much favorable comment since it was placed on the market some time ago. This woodwork has derived its name from its most conspicuous feature, a novel and ingenious construction known as the "Climax Lock-Joint," consisting of a double interlocking wedge joint, as will be seen in the accompanying illustration, which shows a small sample of two pieces of wood put together in this new manner. Woodwork that is glued together with this joint cannot come apart under any ordinary conditions. Each piece of wood is wedged absolutely tight into the corresponding piece, making it impossible for any water closet tank or seat so constructed to open at the seams.

The Climax Lock-Joint

The manufacturers desire that plumbers, jobbers, architects and everybody who is interested in up-to-date closet tanks and seats shall know all about the "Climax lock-joint" construction, and they have therefore prepared small samples as illustrated above, which they will be glad to send, together with full particulars, to interested parties upon request mentioning this journal.

One Experiment.

An experiment made in our Physical Laboratory with one Boiler having 65 square feet of heating surface demonstrated better work than when the same type of Boiler contained 105 square feet. Reason:—The older and now discarded type contained too much flue surface and too little space for combustion of gases.

IDEAL Standard water a good example of a carefully designed boiler.

The construction of every IDEAL Boiler is based on hundreds of similar experiments and tests. As a result, the proper proportion of heating surface, fuel chamber, grate area, length of flues, thinness of waterways, fire travel, etc., make the IDEAL line the standard for excellence.

AMERICAN RADIATORS & IDEAL BOILERS

AMERICAN RADIATOR COMPANY

General Offices, 282-286 Michigan Ave., Chicago.

New York	Cincinnati	Cleveland	Atlanta	Brantford, Ont.	Denver
Philadelphia	Boston	Milwaukee	Minneapolis	Seattle	St. Louis
Pittsburg	Buffalo	Indianapolis	Kansas City	Omaha	San Francisco

The Malleable Pipe Hanger.

George McCullom, of Muskegon, Mich., reports a most gratifying demand for the Malleable pipe hanger herewith illustrated, which he placed on the market some time ago. Among the qualities he mentions in its favor and which have helped to make it a well-liked friend of steamfitters and heating contractors the most notable are these: It is light, strong, durable,

The Malleable pipe hanger.

smooth and nonbreakable, allowing pipe to expand and vibrate, and last, but not least, it is easily installed and costs less than other pipe hangers. It is made for 1¼-inch pipe, 3-inch center, in three to ten holes. The heating trade is invited to write for further particulars and prices, which will be furnished promptly upon request mentioning this journal.

Trade Literature

From the Electric Heat Regulator Company, Minneapolis, Minn.: Handsome wallhanger illustrating this company's heat regulator. The hanger is such a neat sample of the printer's art that it will prove an ornament for any heating contractor's or steamfitter's office. It is free for the asking if it is mentioned that "Domestic Engineering" gave you the tip.

From the Riverside Foundry Company, Kalamazoo, Mich.: "Catalogue No. 4," containing illustrations and descriptions of the Kalamazoo syphons for high and low down tanks, refrigerator drain traps and other plumbing specialties. The catalogue is gotten up in handy shape, 4x7 inches, and copies will be mailed promptly to those who write for it and mention the source of their information concerning its existence.

From Superior Chemical Manufacturing Company, Grand Rapids, Mich: "27," a catalogue of this company's "27 various specialties for the engineer," compiled by "The Man Behind the Quality;" 32 pages, 5x8½ inches. Among these 27 varieties probably one of the most interesting is the "Superior belt dressing," for which the following claims are made: It will stop slipping the moment it is applied; it will make the belts soft and pliable; it increases power and saves friction. Parties interested in engineering specialties can obtain a five-ounce sample tube of this belt dressing and a copy of the company's catalogue upon application mentioning "Domestic Engineering."

From the American Gas Machine Company, 411-425 East Williams street, Albert Lea, Minn.: Catalogue No. 13 of the Hanson and American lighting systems, cold process gas machines, hollow wire systems, gasoline lamps, etc. 4x9 inches, 80 pages, in a handsomely embossed paper cover. This catalogue is gotten up in a most attractive and artistic manner, printed in two colors and profusely illustrated with half-tone engravings from photographs of the company's products, which include the American automatic generator, the Hanson generator, gas and gasoline tanks, the American inverted lighting fixtures, the American hollow wire system lamps, gasoline filters, air pumps, street lighting systems and automatic cold process gas machines. Another chapter of the book is headed "A Few Glimpses Through Our Factory," and its text is accompanied by views of the company's brass foundry, brass finishing department, electric plating room, sheet metal department, storage and stock rooms, main office and show room. All in all it is an interesting as well as an attractive catalogue, and to the trade library of parties interested in the field it covers it will prove an invaluable addition. It will be sent gratis and promptly upon request mentioning "Domestic Engineering."

From the American School of Correspondence, Chicago, Ill.: "Bridge Engineering—Roof Trusses," a manual of practical instruction in the calculation and design of structural steel truss and girder bridges for railroads and highways, including also the analysis and design of roof trusses and other details of mill building construction, by Frank O. Dufour, C. E., assistant professor of civil engineering, University of Illinois; 384 pages, 8vo.; 340 illustrations; indexed; half-morocco, marbled edges. Price $3. The fact that this work by Prof. Dufour has been officially adopted as a text book at the University of Illinois is in itself convincing evidence of its value as a contribution to the literature of structural engineering. It is admirably adapted for the general practical use of the engineer. The problems involved in the calculation and design of modern steel structures are complicated, yet are adequately compassed here in a handy volume of moderate proportions. The treatment is exceedingly clear and concise, and free from the abstruse mathematics that ordinarily overburden other works in this difficult field. Practical and concise treatment marks all details of the analysis, calculation and design of the various types of roof trusses used for buildings of various spans, the methods of securing good light and ventilation, the layout and other details of mills, shops, etc. Photographs of typical modern structures are shown, with full explanation of the methods followed in their design, and in some cases statements of cost. An analytical index is supplied, which immeasurably increases the value of the book as a work of reference. The work throughout is eminently practical.

From American Spiral Pipe Works, West Fourteenth street and Forty-eighth avenue, Chicago: "Spiral Riveted Pressure Pipe and Forged Steel Pipe Flanges," Catalogue No. 5, 8x10 inches, 80 pages. This catalogue is printed in two colors on high grade paper, and is copiously illustrated with excellent half-tone engravings. A large part of the illustrations are from photographs of installations of long water supply lines and exhaust steam piping equipment. Other special features of the catalogue are a large number of blue print profiles and maps of pipe lines recently installed for large mines and hydro-electric power plants and water supply lines for municipalities. Details are also shown

of the company's Forged Steel flanges and Steel Bolted joints and forgings. The main part of the catalogue is devoted to illustrations and descriptions of Taylor's spiral riveted pipe, which has been in use for many years. This pipe is manufactured by a process that is probably not well known, namely, by winding a strip of sheet steel into helical shape with one edge overlapping the other for riveting the seam. The sheet is then drawn and formed in such a manner that metal to metal contact is obtained in the spiral seam, stretching the steel on the outer lap slightly offset, in order that the pipe may be more nearly smooth on the inside. The riveting is done cold by compression or squeezing under enormous pressure, and not by percussion or hammering, thus insuring complete filling of the rivet holes with slight countersink. The pipe comes from the machines in a continuous piece and is cut to any desired length. Parties interested in the above products can obtain a copy of this interesting catalogue upon request mentioning "Domestic Engineering."

Patents

900,533. Flexible Fluid-Joint. Charles G. Hawley, Chicago, Ill., assignor by direct and mesne assignments to Barco Brass and Joint Company, Chicago, Ill., a corporation.

900,534. Valve-Stem. James T. Hayden, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a corporation of Illinois.

900,551. Water-Softener. Llewellyn W. Jones and Frederick B. Leopold, Sewickley, Pa., assignors to Pittsburg Filter Manufacturing Company, Pittsburg, Pa., a corporation of Pennsylvania.

900,561. Self-Heating Soldering-Iron. Frank J. Mann, Scranton, Pa., assignor to Self-Heating Soldering Iron Company, a corporation of New York.

900,603. Flexible Fluid-Joint. Edward E. Silk, Chicago, Ill., assignor to Barco Brass and Joint Company, Chicago, Ill., a corporation of Illinois.

900,617. Stock and Die. Joseph E. Trotter and Hugues A. Crevier, Ste. Anne de Bellevue, Quebec, Canada.

900,811. Valve. Martin S. Wilcox, Middleport, Ohio.

900,966. Centrifugal Pump. George Sulzer, Buffalo, N. Y., assignor to Buffalo Forge Company, Buffalo, N. Y.

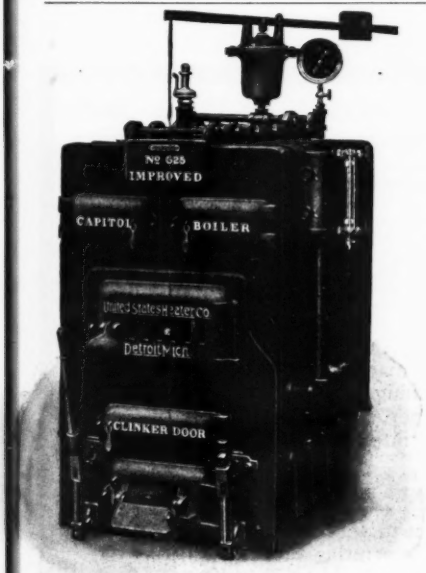
901,438. Water-Closet Apparatus. William U. Griffiths, Philadelphia, Pa.

901,467. Flushing-Valve. Thomas F. Payne, Pittsburg, Pa.

901,466. Ball-Valve for Water-Closets. Thomas F. Payne, Pittsburg, Pa.

901,525. Water-Closet. George M. Depew, Canandaigua, N. Y.

901,545. Sanitary Plumbing Connection. Andrew M. Morrison, Dubuque, Ia.



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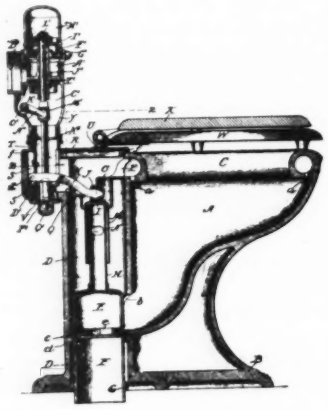
901,534. Sheet Metal Pipe. Charles S. Hamlin, Los Angeles, Cal., assignor to E. W. Wilson, Los Angeles, Cal.

901,571. Ball-Cock Valve. Earl G. Watrous, Chicago, Ill.

901,572. Water-Closet. Earl G. Watrous, Chicago, Ill.



901,584. Flushing-Valve. Walter H. Bowman, Elmhurst, Ill.

901,583. Automatically-Closing Valve for Flushing Water-Closets, etc. Walter H Bowman, Elmhurst, Ill.

901,607. Aluminium-Solder. William H. Finfrock, Chicago, Ill.

901,621. Stop-Cock. Lebbens Jones, Broomfield, W. Va.

901,645. Device for Distilling Water. Joseph R. Perry, Wilkes-Barre, Pa.

901,731. Antifreezing Flush-Tank. Albert W. Oberlies, Philadelphia, Pa., assignor to Rayner Raynor, Philadelphia, Pa.

901,828. Hot-Water Heater. James E. Potts, Cleveland, Ohio.

901,859. Catch-Basin and Trap. John R. Williams, Milwaukee, Wis.

901,932. Molding-Machine. Frederick W. Hall, Merchantville, N. J., assignor, by direct and mesne assignments, to J. W. Paxson Company, Philadelphia, Pa., a Corporation of Pennsylvania.

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"G' wan!"

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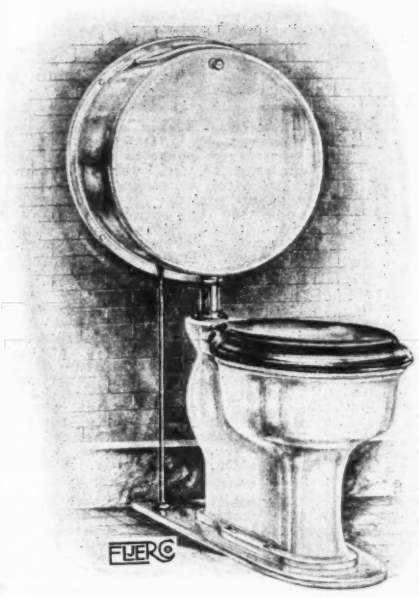

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Our Improved Drains are made with double clean-out. The name plate which covers the clean-out is in two pieces and arranged so that the plumber can set and test at same time, he tests the roughing in of the building, doing away with second trip to set drain.

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Copy and cuts for advertisements should be received by the last day of the week preceding publication. We cannot guarantee insertion or changes in advertisements if received later.

Terms of Subscription: To subscribers in the United States, $1.00 a year.

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Single copies of current issues, 5 cents; copies of back numbers, 10 cents each.

Subscriptions are payable in advance, the regulations of the Post Master General forbidding the extension of credit for subscriptions.

October 31, 1908

CLASSIFIED ADVERTISEMENTS

The rate of advertising under this heading is 10 cents a line an insertion. The average advertisement runs five words to a line. To insure insertion in this column copy should be received not later than Wednesday afternoon.

Help Wanted.

WANTED—HIGH GRADE HEATing man with small amount of capital for contracting business in Chicago. No. 967, "Domestic Engineering," Chicago.

WANTED—FIRST CLASS SALESmen in every locality calling on the plumbing trade to sell an A-1 plumber's tool. Answer, giving territory covered, to Aztec Mfg. Co., 205 Tehama St., San Francisco, Cal.

WANTED—A MAN WHO UNDERstands covering pipes; must be a resident of Chicago; one with business getting ability who wants to go into business. Address No. 952, "Domestic Engineering," Chicago.

A MECHANICAL ENGINEER whose specialty is in heating, ventilating and power work, and who is thoroughly informed in blower, dryer and ventilation work and has designed plans for heating and ventilating schools, churches, pools, vats, etc., and who has had the very best experience in this line, desires to associate himself with some firm who wishes a high class representative. Address No. 968, "Domestic Engineering," Chicago.

Situations Wanted.

SALESMAN—EXPERIENCED IN both plumbing and steam lines, with thorough acquaintance among Eastern, Southern and Middle West jobbing trade, wants a change. Might entertain taking good lines on commission in New York and vicinity. Address No. 963, "Domestic Engineering," Chicago.

SITUATION WANTED—HEATING, Ventilating and Sanitary engineer is open for position as superintendent, estimator or draftsman. Member A. S. H. V. E. and A. S. I. P. S. E. Address No. 969, "Domestic Engineering," Chicago.

MANAGER OR SUPERINTENDENT, experienced in steam or plumbing brass work is open for engagement. Expert in cost account work and as a "leak stopper." Can produce results and save money. Address No. 962, "Domestic Engineering," Chicago.

For Sale.

FOR SALE—A PLUMBING AND HEATING business: town of 5,000; can stay in my building; Address William Haworth, Kaukauna, Wis.

FOR SALE.—ONE FOUR HUNDRED horse power Warren Webster feed water heater, safety valve grease controller, complete; used six months; reasonable. Address M. J. Hawkins, Albany, N. Y.

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EXPERIENCED AND RESPONSIble salesman desires to represent in Chicago manufacturers of plumbers' or steam specialties salable to jobbers, the trade or to consumers; nothing trifling considered; highest references. Address No. 944, "Domestic Engineering," Chicago.

Plumbing Schools.

EARN $5 A DAY—LEARN TO BE a plumber in from 4 to 6 months on easy payments. For particulars address Master Plumbers' Trade School, 3402 Lindell Ave., St. Louis, Mo.

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Fifty Plumbing Charts.—A Layout of fifty Jobs, giving sizes of all piping, Roughing-in Details for all Fixtures, etc. An awfully handy Reference—when in doubt—for the small sum of 25 cents, postpaid, delivered. "Domestic Engineering," Chicago.

Kitchen Boiler Connections.—Range boilers and water backs under various conditions offer an occasional difficulty to the plumber, but the remedy to apply in every case can be found in this book. It contains 196 pages and 113 illustrations and is worth many times the price we ask, $1.00, delivered. "Domestic Engineering," 49-53 N. Jefferson St., Chicago, Ill.

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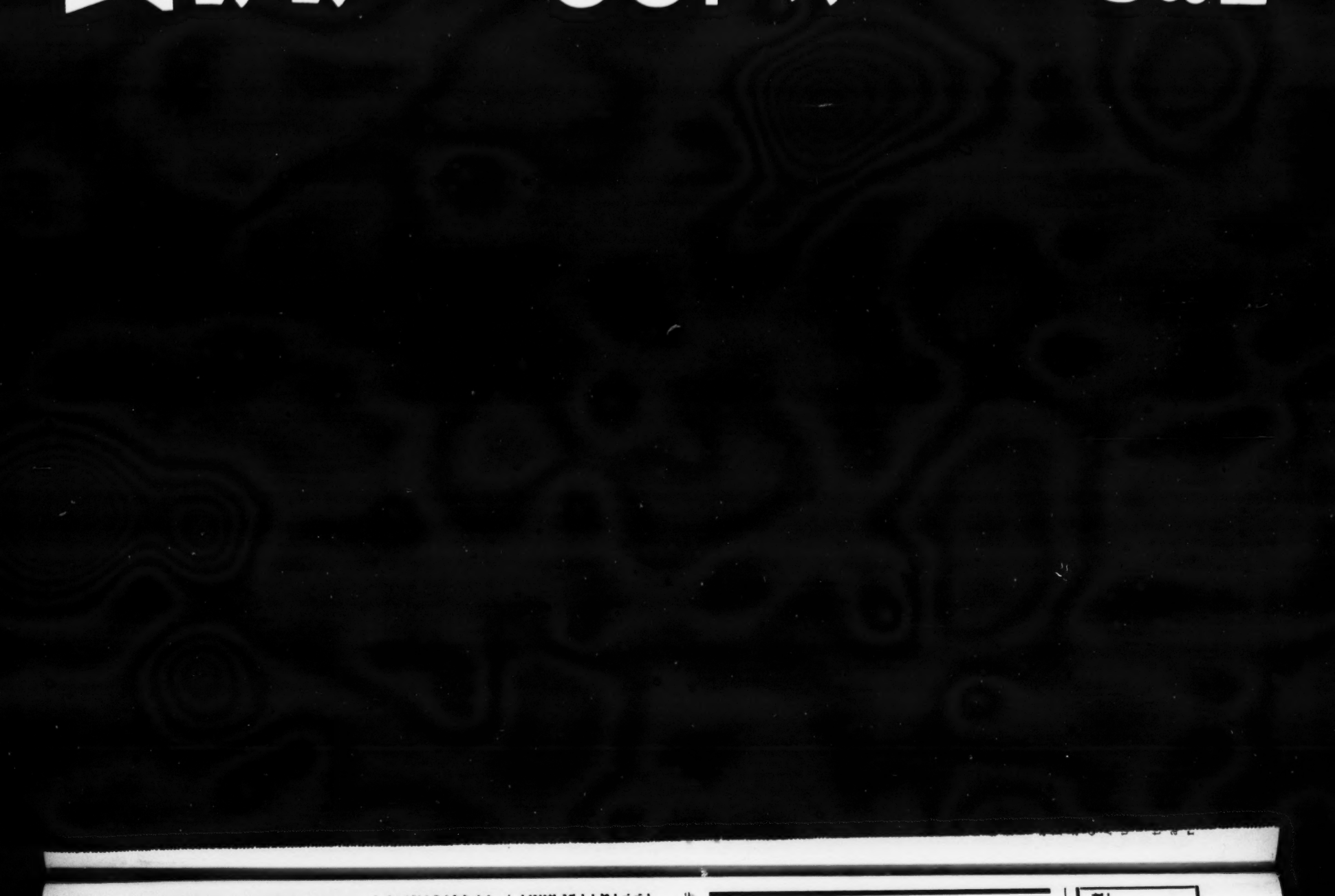
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